ENGLISH

中文

Digital Video Camcorder

数字摄录一体机

Mini DV Digital Video Cassette

VP-D130/D130i
VP-D190/D190i



AF Auto Focus

CCD Charge Coupled Device

LCD Liquid Crystal Display

AF 自动聚焦

CCD 电荷耦合器件

LCD 液晶显示屏

Owner's Instruction Book

Before operating the unit, please read this instruction book thoroughly, and retain it for future reference.

用户说明书

在操作本装置之前，请彻底阅读本说明书并保存好，以便将来查阅。

SAMSUNG ELECTRONICS

This product meets the intent of Directive 89/336 CEE, 73/23 CEE, 93/68 CEE.

本产品符合89/336 CEE, 73/23 CEE, 93/68 CEE 指令的规定。

Contents

目录

ENGLISH

Contents

中文

目录

ENGLISH

Contents

中文

目录

Contents

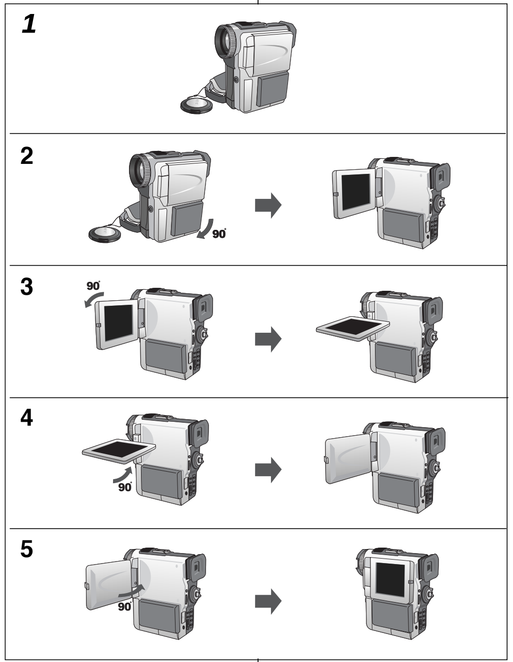
目录

Notes and Safety Instructions

Notes regarding the rotation of the LCD screen

Please rotate the LCD screen carefully as illustrated.
Over rotation may cause damage to the inside of the hinge that connects the LCD screen to the Camcorder.

1. LCD screen closed.
2. Standard recording using the LCD screen.
3. Recording when looking at the LCD screen from the top.
4. Recording when looking at the LCD screen from the front.
5. Recording with the LCD screen closed.



注意事项和安全说明

有关旋转液晶显示屏的注意事项

请按说明小心地旋转液晶显示屏。过度旋转会造成连接液晶显示屏到摄录一体机的铰链的损坏。

1. 关闭液晶显示屏。
2. 使用液晶显示屏的标准录制。
3. 在俯视液晶显示屏时录制。
4. 正对液晶显示屏时录制。
5. 液晶显示屏关闭时录制。

ENGLISH

Notes and Safety Instructions

Notes regarding moisture condensation

1. A sudden rise in atmospheric temperature may cause condensation to form inside the camcorder.

for example:
- When you move the camcorder from a cold location to a warm location (e.g. from outside to inside during winter.)
- When you move the camcorder from a cool location to a hot location (e.g. from inside to outside during the summer.)

2. If the (DEW) protection feature is activated, leave the camcorder for at least two hours in a dry, warm room with the cassette compartment opened and the battery removed.

Notes regarding CAMCORDER

1. Do not leave the camcorder exposed to high temperature (above 60°C or 140°F).
   For example, in a parked car in the sun or exposed to direct sunlight.

2. Do not let the camcorder get wet.
   Keep the camcorder away from rain, sea water, and any otherform of moisture. If the camcorder gets wet, it may get damaged.
   Sometimes a malfunction due to exposure to liquids cannot be repaired.

Notes regarding COPYRIGHT

Television programs, video tapes, DVD titles, films, and other program materials may be copyrighted.
Unauthorized copying of copyrighted material may be against the law.

中文

注意事项和安全说明

有关旋转液晶显示屏的注意事项

1. 气温的突然升高会导致摄录一体机内部结露。

例如:
- 将摄录一体机从较为寒冷的地方带进温暖的地方（如冬季从室外走进室内）。
- 将摄录一体机从凉爽的地方带到炎热的地方（如夏季从室内到室外）

2. 如果启动了（结露）保护功能，使摄录一体机停留在干燥、温暖的室内至少两个小时，并打开带仓并取出电池。

有关结露的注意事项

1. 不要使摄录一体机暴露在高温下（60°C 或 140°F以上）。
   例如：在阳光下停放的小车里或在阳光直射之下。

2. 不要使摄录一体机受潮。
   使摄录一体机远离雨水、海水和任何形式的潮气。如果摄录一体机受潮，会受到损坏。
   有时，由于受潮而产生的故障无法修复。

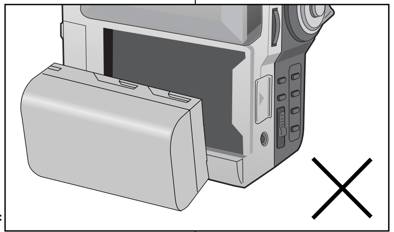
关于版权的注意事项

电视节目、录象带、DVD节目、电影和其它节目材料可能有版权。
未授权复制有版权的材料可能违法。

ENGLISH

Notes and Safety Instructions

Notes regarding the battery pack



- Make sure that the battery pack is fully charged before starting record.
- To preserve battery power, keep your camcorder turned off when you are not operating it.
- If your camcorder is in CAMERA mode, and it is left in STBY mode without being operated for more than 5 minutes with a tape installed, it will automatically turn itself off to protect against unnecessary battery discharge.
- Make sure that the battery pack is fitted firmly into place. Dropping the battery pack may damage it.
- A brand new battery pack is not charged. Before using the battery pack, you need to charge it completely.
- It is a good idea to use the viewfinder rather than the LCD when recording over a long time, because the LCD uses up more battery power.

* When the battery reaches the end of its life, please contact your local dealer. The batteries have to be dealt with as chemical waste.

Notes regarding the Video Head Cleaning

- To ensure normal recording and a clear picture, clean the video heads regularly. If a square block-shape distorts playback, or if during playback only a blue screen is displayed, the video heads may be dirty. If this happens, clean the video heads with a dry type cleaning cassette.
- Do not use a wet-type cleaning cassette. It may damage the video heads.

中文

注意事项和安全说明

有关电池组的注意事项

- 在开始录制之前，保证电池组完全充电。
- 为了保存电池能量，在不使用摄录一体机时要关闭。
- 如果摄录一体机处于CAMERA（摄像机）模式并保持在STBY（待机）模式而不工作超过5分钟，且装入了磁带，机器会自动关闭以防止电池不必要的放电。
- 保证电池组牢固地安装到位。掉落电池组会使之损坏。
- 全新的电池组没有充电。在使用电池组之前，需要给电池组充满电。
- 当较长时间地录制时，好的做法是使用取景器而不是液晶显示屏，因为液晶显示屏会消耗更多的电池能量。

* 在电池达到其使用寿命时，请与本地的经销商联系。必须按化学废物处理电池。

有关视频磁头清洁的注意事项

- 为了保证正常录制和清晰的画面，要定期地清洁视频磁头。如果出现方块形状失真或在播放期间只显示蓝屏，视频磁头可能比较脏。如果发生这种情况，用干式清洁带清洁视频磁头。
- 不要使用湿式清洁带，那样会损坏视频磁头。

Notes and Safety Instructions

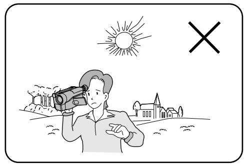
Note regarding the LENS

- Do not film with the camera lens pointing directly at the sun. Direct sunlight can damage the CCD(Charge Coupled Device).

Notes regarding electronic viewfinder

1. Do not position the camcorder such that the viewfinder is pointing towards the sun. Direct sunlight can damage the inside of the viewfinder. Be careful when placing the camcorder under sunlight or near a window exposed to sunlight.
2. Do not pick up the camcorder from the viewfinder.
3. Over-rotating of the viewfinder may damage it.

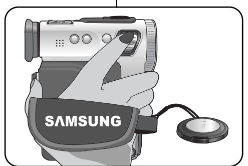
Notes regarding 'Record' or 'Playback' using the LCD



1. The LCD display has been manufactured using high precision technology. However, there may be tiny dots (red, blue or green in color) that appear on the LCD display. These dots are normal and do not affect the recorded picture in any way.
2. When you use the LCD display under direct sunlight or outdoors, it may be difficult to see the picture clearly. If this occurs, we recommend that the viewfinder is used.
3. Direct sunlight can damage the LCD monitor.

Notes regarding the hand strap

- To ensure a steady picture during filming, check that the hand strap is properly adjusted.
- Do not force your hand into the hand strap as you could damage it.



注意事项和安全说明

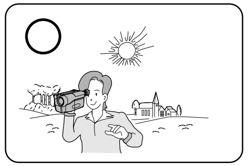
有关镜头的注意事项

- 拍摄时，不要使摄像机镜头直接朝向太阳。阳光的直射会损坏CCD（电荷耦合器件）。

有关电子取景器注意事项

1. 不要将摄录一体机放置在使取景器朝向太阳的地方。阳光的直射会损坏取景器的内部器件。在阳光下或靠近受阳光照射的窗户使用摄录一体机时要小心。
2. 不要从取景器拿摄录一体机。
3. 取景器的过度旋转会损坏取景器。

有关使用液晶显示屏'摄像'或'播放'的注意事项



1. 液晶显示屏是以高精度技术制造的。然而，液晶显示屏上可能出现小点（红色、蓝色或绿色）。这些小点是正常现象且不会以任何方式影响录制的图像。
2. 如果在阳光直射下或户外使用液晶显示屏时，很难看清图像。如果出现这种情况，我们建议使用取景器。
3. 阳光直射会损坏液晶显示屏监视器。

有关手带的注意事项

- 为了保证拍摄期间图像的稳定，要检查手带是否适当地调节好。
- 不要将手强力伸入手带内，那样会损坏手带。

Notes and Safety Instructions

Precautions regarding the Lithium battery

1. The lithium battery maintains the clock function and user settings, even if the battery pack or AC adapter is removed.

2. The lithium battery for the camcorder lasts about 1 months under normal operation from the time of installation.

3. When the lithium battery becomes weak or is dead, the date/time indicator will flash for about five seconds when you set the power switch to CAM mode.
   In this case, you are recommended that you should connect the camcorder to power to fully recharge the embedded lithium battery. If you see the same problem occur even on the fully recharged battery, you'd better contact to a nearby customer service center as the battery has had it.

4. Danger of explosion if battery is incorrectly replaced.
   Replace only with the same or equivalent type.

Warning: Keep the LITHIUM BATTERY(REMOCON) out of reach of children. Should a battery be swallowed, consult a doctor immediately.

注意事项和安全说明

有关锂电池的注意事项

1. 即使取出了电池组或交流适配器，锂电池也保持了时钟功能和用户设置。

2. 从安装之时起，摄录一体机的锂电池在正常操作下可使用约达1个月。

3. 如果锂电池电量不足或没电时，在将电源开关设置到摄像机模式，日期/时间指示灯会闪烁约五秒钟。
   这时，建议将摄录一体机连接到电源上，以给内置的锂电池充满电。如果充满电的电池仍然出现相同的问题，最好与就近的客户服务中心联系更换电池。

4. 更换电池不当，会有爆炸的危险。只用相同或类似类型的电池更换。

警告：使小孩远离锂电池 (遥控器) 。如果误吞了电池，立即找医生救治。

Getting to Know Your Camcorder

Features

- **Digital data transfer function with IEEE1394**
  By incorporating the IEEE 1394 (i.LINK™ : i.LINK is a serial data transfer protocol and interconnectivity system, used to transmit DV data) high speed data transport port, both moving and still images can be transferred to a PC, making it possible to produce or edit various images. (VP-D130/D190 is not able to record and receive digital data from another DV Device.)
- **USB interface for digital image data transfer**
  You can transfer still images and short video clips to a PC using the USB interface without an add-on card.
- **PHOTO**
  The PHOTO function lets you capture an object as a still along with sound, while in Camera mode.
- **480x Digital zoom**
  Allows you to magnify an image up to 480 times its original size.
- **Colour TFT LCD**
  A high-resolution colour TFT LCD (with 200,000 pixels) gives you clean, sharp images as well as the ability to review your recordings immediately.
- **Electronic Image Stabilizer (EIS)**
  The EIS compensates for any handshake, reducing unstable images particularly at high magnification.
- **Various digital effects**
  The DSE (Digital Special Effects) allows you to give your films a special look by adding various special effects.
- **Back Light Compensation (BLC)**
  When you record a subject with the light source behind it or a subject with a light background, the BLC function compensates for the bright background.
- **Program AE**
  The Program AE enables you to alter the shutter speed and aperture to suit the type of scene/action to be filmed.
- **Digital Still Camera function (VP-D190/D190i only)**
  ■ Using SmartMediaCard, you can easily record and playback standard still images.
  ■ You can transfer standard still images on SmartMediaCard to PC using USB interface.

摄录一体机的一般知识

特征

- **采用IEEE1394的数字数据传输功能**
  通过结合IEEE 1394 (i.LINK™ :i.LINK是一种串行数据传输协议和互连系统， 用于传送DV数据) 高速数据传输端口，可传送移动图像和静止图像到计算机上，使制作或编辑各种图像成为可能。(VP-D130/D190 不能从另一台DV设备录制和接收数字数据。)
- **用于数字图像数据传输的USB 接口**
  可使用USB接口将静止图像和短的录像剪辑传送到计算机上，而不用插卡。
- **照片**
  照片功能使您能够在摄像机模式捕捉有声的静止物体。
- **480x 数字变焦**
  使您能够将一个图像放大到原始大小的480倍。
- **彩色TFT液晶显示屏**
  高分辨率的彩色TFT液晶显示屏(带有200,000个像素)向您提供清晰的图像以及立即观看录像的能力。
- **电子图像稳定(EIS)**
  EIS补偿部分手抖动，尤其在较高的放大率减少不稳定的图像。
- **各种数字效果**
  DSE (数字特殊效果)通过添加各种特技效果使您的摄影别具一格。
- **背光补偿 (BLC)**
  当您拍摄后面有光源的物体或有亮的背景光的物体时，背光补偿（BLC）功能可补偿较亮的背景。
- **程序自动曝光（Program AE）**
  程序自动曝光可使快门速度和光圈与被摄场景/动作类型相匹配。
- **数字静止摄像机功能 (只限于VP-D190/D190i)**
  ■ 使用SmartMedia卡，可非常容易地录制并重放静止的图像。
  ■ 使用USB接口可将SmartMedia卡上的标准静像传送到计算机上。

ENGLISH | **中文**

Getting to Know Your Camcorder

摄录一体机的一般知识

Accessories Supplied with camcorder

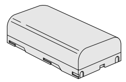
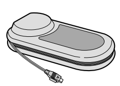
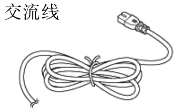
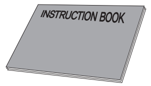
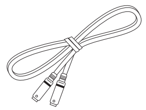
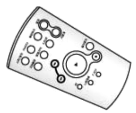
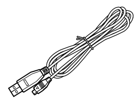
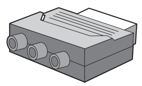
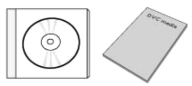
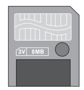
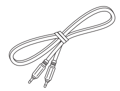
随摄录一体机提供的配件

Make sure that the following basic accessories are supplied with your digital video camera.

确认已随数字视频摄录一体机供应下列基本配件。

Basic Accessories

1. Lithium Ion Battery pack
2. AC Power Adapter
3. AC Cord
4. AUDIO/VIDEO cable
5. Instruction Book
6. Lithium battery for Remote Control (TYPE: CR2025, 1 EA)
7. S-VIDEO cable
8. Remote Control
9. USB cable
10. Scart adapter
11. Software CD, Instruction Book (VP-D190/D190i only)
    - ■ VP-D130/D130i: DVC Media 2.0
    - ■ VP-D190/D190i: DVC Media 1.0
12. SmartMediaCard (VP-D190/D190i only)
13. USB AUDIO cable (VP-D130/D130i only)

1. 锂离子电池组 	2. 交流电源适配器 	3. 交流线 
4. 音频/视频电缆 	5. 说明书 	6. 遥控器锂电池 (类型: CR 2025, 1 EA) 
7. S-VIDEO 电缆 	8. 遥控器 	9. USB 电缆 
10. Scart适配器 	11. 软件CD和说明书 	12. SmartMedia卡 (只限于VP-D190/D190i) 
13. USB 音频电缆 (只限于VP-D130/D130i) 		

基本配件

1. 锂离子电池组
2. 交流电源适配器
3. 交流线
4. 音频/视频电缆
5. 说明书
6. 遥控器锂电池 (类型：CR2025, 1 EA)
7. S-VIDEO 电缆
8. 遥控器
9. USB电缆
10. Scart适配器
11. 软件CD, 说明书 (只限于VP-D190/D190i)
    - ■ VP-D130/D130i: DVC 介质 2.0
    - ■ VP-D190/D190i: DVC介质1.0
12. SmartMedia卡 (只限于VP-D190/D190i)
13. USB 音频电缆 (只限于VP-D130/D130i)

ENGLISH

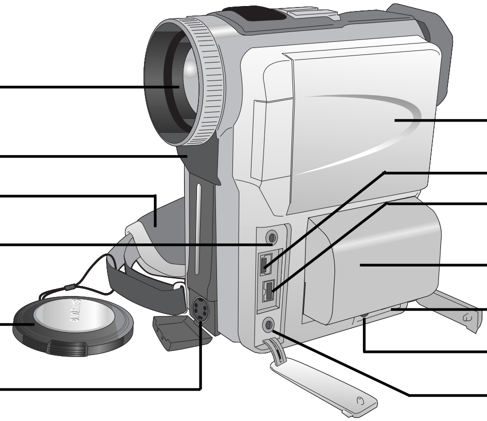
中文

Getting to Know Your Camcorder

摄录一体机的一般知识

Front & Left View

正视图和左视图



1. Lens
2. Lens Cover
3. Remote Sensor
4. Hook for hand strap (see page 20)
5. TFT LCD monitor
6. Battery Pack (see page 22)
7. External MIC in (see page 62)
8. USB Jack (see page 73)
9. DV out (VP-D130/D190) (see pages 71, 72)
   DV in/out (VP-D130i/D190i)
10. Audio/Video (see page 67)
11. Earphone Jack
12. DC Jack (see page 21)
13. S-Video Jack

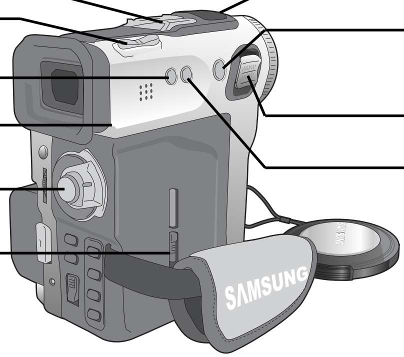
1. 镜头
2. 镜头盖
3. 遥控传感器
4. 手带钩环 (见20 页)
5. TFT液晶显示屏
6. 电池组(见22页)
7. 外接话筒插口(见62页)
8. USB插口(见73页)
9. DV 输出(VP-D130/D190) (见71,72页)
   DV 输入/输出(VP-D130i/D190i)
10. 音频/视频(见67 页)
11. 耳机插口
12. DC插口(见21页)
13. S-Video插口

Getting to Know Your Camcorder

摄录一体机的一般知识

Right & Top View

右视图及俯视图

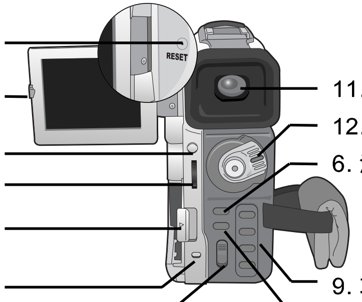


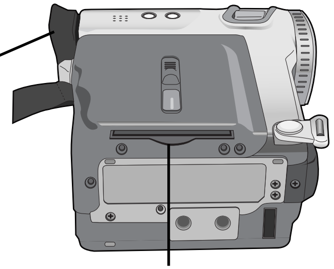
1. **SPEAKER**
2. **Video Light Holder**
3. **Dual Zoom (See page 43)**
4. **Custom.Q button (See page 58)**
5. **Easy.Q button (See page 57)**
6. **Photo button (See page 64)**
7. **Zoom lever (See page 43)**
8. **Card Eject Switch (See page 78)**
   (VP-D190/D190i only)
9. **Internal MIC**
10. **START/STOP button**

1. 话筒
2. 视频灯座
3. 双变焦 (见43页)
4. 自定义按钮 (见58页)
5. 简易按钮(见57页)
6. 照片按钮(见64页)
7. 变焦杆 (见43页)
8. 取卡开关 (见78页)
   (只限于VP-D190/D190i)
9. 内置话筒
10. 启动/停止按钮

Getting to Know Your Camcorder

Rear & Bottom View





1. **LCD open**
2. **MENU button (See page 33)**
3. **MENU DIAL (MENU SELECT/VOLUME/ M.FOCUS) (See page 33)**
4. **Battery Release button (See page 89)**
5. **Charging indicator (See page 22)**
6. **FADE button (See page 61)**
7. **DISPLAY button**
8. **TAPE Eject switch**
9. **Functions Keys**
10. **SmartMediaCard Slot (VP-D190/D190i only)**
11. **Viewfinder (see page 30)**
12. **Power switch (see page 26)**
13. **RESET (see page 34)**

Functions Keys

VCR	CAM	M.PLAY (VP-D190/D190i only)
◀◀ (REW)	EDIT –	REV
▶/❚❚ (PLAY/STILL)	MF/AF **(See page 59)**	S.SHOW
▶▶ (FWD)	EDIT +	FWD
■ (STOP)	BLC **(See page 60)**	DELETE**(See page 87)**

摄录一体机的一般知识

后视图和底视图

1. 液晶显示屏打开
2. 菜单按钮(见33页)
3. 菜单调节盘 (菜单选择/音量/ M.焦距) (见33页)
4. 电池释放按钮 (见89页)
5. 充电指示灯 (见22页)
6. 淡按钮 (见61页)
7. 显示按钮
8. 取带开关
9. 功能键
10. SmartMedia卡插槽 (只限于VP-D190/D190i)
11. 取景器(见30页)
12. 电源开关(见26页)
13. 复位(见34页)

功能键

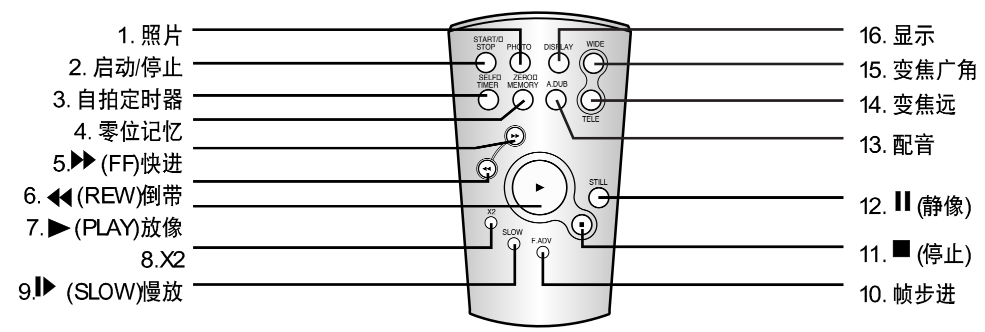
手动录像	摄像机	录像机 (只限于VP-D190/D190i)
◀◀ (快倒)	编辑–	快倒
▶/❚❚ (播放/静止)	手动聚焦/自动聚焦 (见59页)	慢放
▶▶ (快进)	编辑+	快进
■ (停止)	背光补偿 (见60页)	删除(见87页)

Getting to Know Your Camcorder

摄录一体机的一般知识

Remote control

遥控器



1. **PHOTO**
2. **START/STOP**
3. **SELF TIMER (see page 19)**
4. **ZERO MEMORY (see page 70)**
5. **▶▶ (FF)**
6. **◀◀ (REW)**
7. **▶ (PLAY)**
8. **X2 (see page 69)**
9. **I▶ (SLOW)**
10. **Frame Advance (see page 69)**
11. **■ (STOP)**
12. **II (STILL)**
13. **A.DUB (see page 62)**
14. **Zoom TELE**
15. **Zoom WIDE**
16. **DISPLAY (see page 17, 18)**

1. 照片
2. 启动/停止
3. 自拍定时器 (见19页)
4. 零位记忆 (见70页)
5. ▶▶ 快进
6. ◀◀ 快倒
7. ▶ 放像
8. X2 (见69页)
9. I▶ 慢放
10. 帧步进 (见69页)
11. ■ 停止
12. II 静止
13. A.DUB配音 (见62页)
14. 变焦远
15. 变焦广角
16. 显示 (见17,18页)

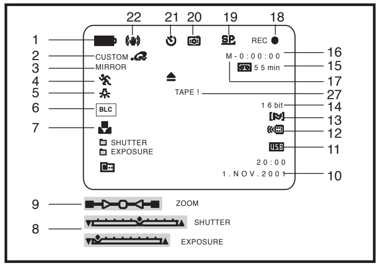
ENGLISH

Getting to Know Your Camcorder

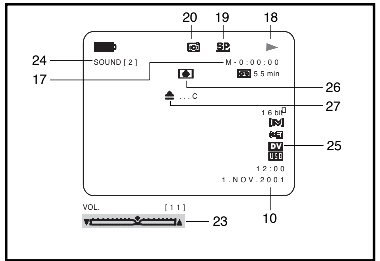
OSD (On Screen Display in CAM and VCR modes)

1. Battery level (see page 24)
2. Custom or Easy mode (see pages 57, 58)
3. DSE (Digital Special Effects) mode (see page 46)
4. Program AE (see page 40)
5. White Balance mode (see page 42)
6. BLC (Back Light Compensation) (see page 60)
7. Manual focus (see page 59)
8. Shutter speed and EXPOSURE (see page 56)
9. Zoom position (see page 43)
10. DATE/TIME (see page 52)
11. USB
12. REMOCON
13. WIND CUT(see page 51)
14. Audio recording mode (see page 50)
15. Remaining Tape (measured in minutes)
16. Tape counter
17. Zero memory indicator (see page 70)
18. Operating mode
19. Record speed mode
20. PHOTO mode
21. Self recording and waiting timer (see page 19)
22. EIS (see page 45)
23. Volume control (see page 32)
24. Audio playback channel
25. DV IN (VP-D130i/D190i only) (DV data tra-nsfer mode) (see page 72)
26. DEW (See page 7)
27. Message Line

OSD in CAM mode



OSD in VCR mode



中文

摄录一体机的一般知识

OSD (摄像机和录像机模式下的在屏显示)

1. 电池电量 (见24页)
2. 自定义或简易模式(见57, 58页)
3. DSE (数字特殊效果) 模式(见46页)
4. 程序自动曝光 (见40页)
5. 白平衡模式(见42页)
6. BLC (背光补偿) (见60页)
7. 手动聚焦(见59页)
8. 快门速度和曝光 (见56页)
9. 变焦位置 (见43页)
10. 日期/时间 (见52页)
11. USB
12. 遥控
13. 风声消除(见51页)
14. 录音模式 (见50页)
15. 磁带剩余 (以分钟计)
16. 磁带计数器
17. 零位记忆指示器 (见70页)
18. 操作模式
19. 录制速度模式
20. 照片模式
21. 自拍和等待定时器 (见19页)
22. EIS (见45页)
23. 音量控制 (见32页)
24. 音频播放频道
25. DV 输入(只限于VP-D130i/D190i) (DV数据传输模式) (见72页)
26. DEW (见7页)
27. 信息行

ENGLISH

Getting to Know Your Camcorder

OSD (On Screen Display in M.REC/M.PLAY modes)

⌘ These items are available in for the VP-D190/D190i models only.

28. Folder number-file number (see page 79)
29. Image counter
 - Current still image/Total number of recordable still images.
30. CARD (memory) indicator
31. Image recording and loading indicator
32. Quality
33. ERASE PROTECTION indicator (see page 86)
34. Print Mark(see page 85)
35. SLIDE SHOW

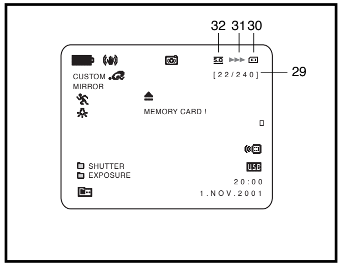
Turning the OSD on/off (On Screen Display)

⌘ When you set the power switch to CAM, the OSD is automatically turned on.
⌘ When you set the power switch to VCR, the OSD is automatically turned on.

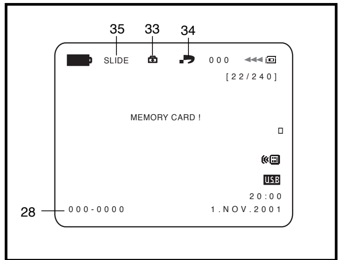
● **Turning OSD on/off**
Press the DISPLAY button on the rear side panel.
- Each press of the button toggles the OSD function on and off.
- When you turn the OSD off,
 In CAM mode: The STBY and REC modes are always displayed on the OSD, even when the OSD is turned OFF and the key input is displayed for 3 seconds then turned off.
 In VCR mode: When you press any keys like the Function key that are relative to VCR operation, the function is displayed on the OSD for 3 seconds before it turns off.

● **Turning on/off the DATE/TIME**
- The DATE/TIME is not affected when the OSD function is switched ON or OFF.
- To turn the DATE/TIME on or off, access the menu and change the DATE/TIME mode. (see page 52)
- You may also use the Dial Navigator to turn the DATE/TIME ON or OFF. (only in CAM / M.REC mode)

OSD in M.REC mode



OSD in M.PLAY mode



中文

录像机模式下在屏显示

OSD(在手动录制/手动播放模式下的在屏显示)

⌘ 这些项目只可用于VP-D190/D190i 型。

28. 文件夹号-文件号 (见79页)
29. 图像计数器
 – 当前静像/可记录的静像的总数。
30. 卡(记忆) 指示器
31. 录像和加载指示器
32. 质量
33. 防误抹保护指示器 (见86页)
34. 打印标记(见85页)
35. 放映幻灯片

打开/关闭在屏显示 (在屏显示)

⌘ 将电源开关设定到“摄象机(CAM)”位置时，在屏显示(OSD)功能自动打开。
⌘ 将电源开关设定到“录像机(VCR)”位置时，在屏显示(OSD)功能自动打开。

● **打开/关闭在屏显示**
按下后侧板上的显示按钮。
- 每按一次按钮就会在打开和关闭在屏显示功能之间切换。
- 在关闭在屏显示时，
 在摄像机模式：在屏显示总是显示待机和录像模式，甚至在在屏显示关闭时，键输入显示3秒种后关闭。
 在录像机模式：在按如功能键等与摄像机操作有关的键时，在在屏显示关闭之前，显示功能3秒种。

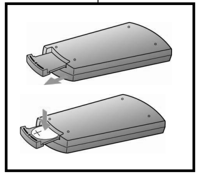
● **打开/关闭日期/时间**
- 在打开或关闭在屏显示时，日期/时间不会受到影响。
- 若要打开或关闭日期/时间，访问菜单并改变日期/时间模式 (见52页)
- 也可使用拨号导航器打开或关闭日期/时间 (只在摄像机/手动录制模式)

Getting to Know Your Camcorder

How to use the Remote Control

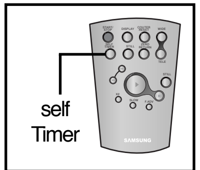
Battery Installation for the Remote Control

- You need to insert or replace the lithium battery when :
  - You purchase the camcorder.
  - The remote control doesn't work.
- Ensure that you insert the lithium cell correctly, following the + and - markings.
- Be careful not to reverse the polarity of the battery.



Self Record using the Remote Control

When you use the Self Timer function on the remote control, the recording begins automatically in 10 seconds.



1. Set the camcorder to CAM mode.
2. Press the SELF TIMER button until the appropriate indicator is displayed in the viewfinder.
3. Press the START/STOP button to start the timer.
   - After a 10 second wait, recording starts.
   - Press START/STOP again when you wish to stop recording

摄录一体机的一般知识

怎样使用遥控器

遥控器电池的安装

- 遇到下列情况，必须装入或更换锂电池：
  - 购买摄录一体机时;
  - 遥控器不能正常工作时
- 按照+和－标记，正确装入锂电池。
- 应小心不要将电池的极性颠倒了。

使用遥控器自拍

在使用遥控器上的自拍定时器功能时，在10秒内自动开始拍摄。
自拍定时器

1. 将摄录一体机置于摄像机模式。
2. 按下自拍定时器按钮直到取景器上亮起适当指示灯。
3. 按下启动/停止按钮，启动定时器。
   - 在等待10秒，开始拍摄。
   - 在想要停止拍摄时，再次按下启动/停止按钮。

ENGLISH

Preparation

Adjusting the Hand Strap

It is very important to ensure that the Hand strap has been correctly adjusted before you begin your recording.
The hand strap enables you to :
- Hold the camcorder in a stable, comfortable position.
- Press the Zoom and START/STOP button without having to change the position of your hand.

Hand strap

a. Pull open the Hand Strap cover and release the Hand Strap.
b. Adjust its length and stick it back onto the Hand Strap cover.
c. Close the Hand Strap cover again.

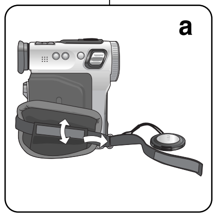
中文

准备

调整手带

在开始拍摄之前，重要的是保证正确地调节了手带。

手带使您能够：
- 稳定而舒适地拿住摄录一体机。
- 不需改变手的位置，便可按“变焦（ZOOM）”和“启动/停止（START/STOP）”钮。

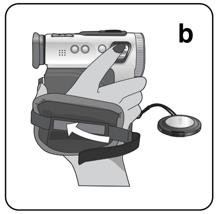


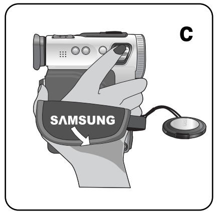
手带

a. 拉开手带护罩，松开手持带。

b. 调节手带的长度，再将其粘回到手带护罩上。

c. 重新盖上手带护罩。





ENGLISH

Preparation

Connecting a Power Source

There are two types of power source that can be connected to your camcorder.
- The AC Power Adapter and AC cord : used for indoor recording.
- The battery Pack : used for outdoor recording.

To use the AC Power adapter and the DC Cable

1. Connect the AC Power adapter to the AC cord.

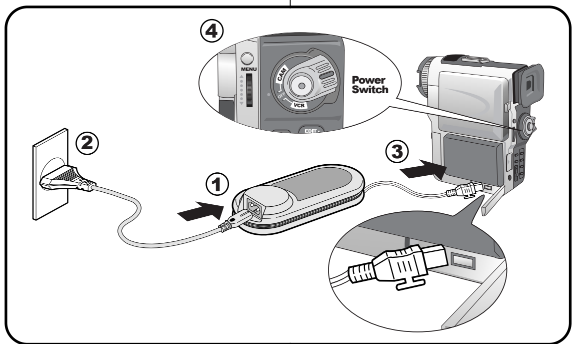
2. Connect the AC cord to a wall socket.

Reference

The plug and wall socket type may differ according to your resident country.

3. Connect the DC cable to the DC jack socket of the camcorder.

4. Set the camcorder to each mode by holding down the tab on the power switch and turning it to the CAM, VCR, M.REC, M.PLAY mode.



中文

准备

连接电源

有两种连接摄录一体机电源的方法

- 使用交流电源适配器和交流电缆：适用于室内拍摄。
- 使用电池组：适用于室外拍摄。

使用交流电源适配器和直流电缆的方法

1. 将交流电源适配器与交流电源线连接。

2. 将交流电源适配器与墙上电源插座相连

参考

按照当地条件，插头和墙上电源插座的型号可能有所不同

3. 将直流电缆与摄录一体机的直流的插孔相连。

4. 按住电源开关的凸起，将电源开关推到摄象机、录象机、手动录制、手动放像模式，从而将摄录一体机设置到每个模式。

ENGLISH | **中文**

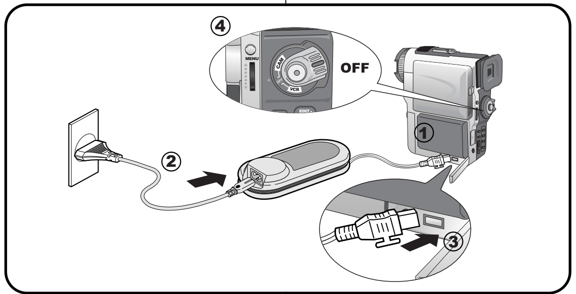
Preparation

Using the Lithium Ion Battery Pack

⌘ The amount of continuous recording time available depends on :
- The type and capacity of the battery pack you are using.
- How often the Zoom function is used. It is recommended that you have several batteries available.

Charging the Lithium Ion Battery Pack

1. Attach the battery pack to the camcorder.
2. Connect the AC Power adapter to an AC cord and connect the AC cord to a wall socket.
3. Connect the DC cable to the DC jack socket on the camcorder.
4. Turn the Camera power switch to off, and the charging indicator will start to flash showing that the battery is charging.



Blinking time	Charging rate
Once per second	Less than 50%
Twice per second	50% ~ 75%
Three times per seconde	75% ~ 90%
Blinking stop and stays on	90 ~ 100%
On for a second and off for a second	Error - Reset the battery and the DC cable

5. When the battery is fully charged, disconnect the battery and the AC Power adapter from the camcorder.
   - Even with the power switched off, the battery will still discharge if it is left connected to the camcorder.

Reference

- ■ The battery pack may be charged a little at the time of purchase.
- ■ To prevent reduction in the life and capacity of the battery pack, always remove it from the camcorder after it is fully charged.

准备

锂离子电 池组的使用方法

⌘ 连续录象时间的长短取决于:
-使用的电池组的型号和容量
-使用变焦拍摄功能的频繁程度，建议 您准备若干电池组，以备不时之需。

为锂离子电池 组充电

1. 将电池组安装到摄录一体机内。
2. 将交流电源适配器与交流电源线连接，并将交流电源线与墙上电源插座相连。
3. 将直流电源电缆与摄录一体机的直流插口连接。
4. 关掉摄录一体机的电源开关，充电指示灯开始闪烁，表明电池正在充电。

闪烁时间	充电速度
1秒钟闪烁1次	指示充电量少于50%
1秒钟闪烁2次	指示已充电50%到75% 。
1秒钟闪烁3次	指示已充电75%到90%
停止闪烁并保持亮	指示已充电90%到100%
亮1秒钟，灭1秒钟	指示发生故障—复位电池组和直流电源电缆。

5.充电完毕时，分开摄录一体机、交流电源适配器和电池。
- 即使电源开关已经断开，如果仍然连接到摄录一体机上，电池会放电。

参考

- ■ 在购买电池组时，电池组可能已经充了些电。
- ■ 为了防止电池组寿命和容量下降，在充满电后，应将电池组从摄录一体机中取出。

Preparation

Using the Lithium Ion Battery Pack

Table of continuous recording time based on model and battery type.

- If you close the LCD screen, it switches off and the EVF switches on automatically.
- The continuous recording times given in the table above are approximations.
  Actual recording time depends on usage.

Time / Battey	Charging time	Continuous recording time	
		LCD ON	EVF ON
SB-L70	Approx. 1hr 30min	Approx. 1hr	Approx. 1hr 30min
SB-L110	Approx. 2hr	Approx. 1hr 30min	Approx. 2hr
SB-L220	Approx. 3hr 30min	Approx. 3hr 10min	Approx. 4hr 10min

Reference

- The battery pack should be recharged in an environment of between 32°F (0°C) and 104°F (40°C).
- The battery pack should never be charged in a room temperature that is below 32°F (0°C).
- The life and capacity of the battery pack will be reduced if it is used in temperatures below 32°F (0°C) or left in temperatures above 104°F (40°C) for a long period, even when it is fully recharged.
- Do not put the battery pack near any heat source (fire or flames, for example).
- Do not disassemble, process, pressure, or heat the Battery Pack.
- Do not allow the + and - terminals of the battery pack to be short-circuited.
- It may cause leakage, heat generation, induce fire and overheating.

准备

使用锂离子电池组

根据型号和电池类型的连续录像表。

- 如果关闭液晶显示屏，显示屏会关闭且EVF会自动打开。
- 上表中给出的连续录制时间是大约数。
  实际的录制时间取决于用途。

时间 / 电池	充电时间	连续录像时间	
		液晶显示屏打开	EVF打开
SB-L70	约1小时30分钟	约1小时	约1小时30分钟
SB-L110	约2小时	约1小时30分钟	约2小时
SB-L220	约3小时30分钟	约3小时10分钟	约4小时10分钟

参考

- 电池应在室温32° F(0° C) 到104° F (40° C)的条件下充电。
- 不应在室温低于32° F(0° C)的条件下充电。
- T如果在温度低于32° F(0° C)或高于104° F (40° C)的条件下长期使用电池组，即使是完全充足电，电池组寿命和容量也要降低。
- 不要将电池组放置在靠近热源处（例如火或火焰）。
- 不要分解、处理、压、或加热锂电池组。
- 不允许电池组的+和-极短路。
- 这会引起漏电、发热、起火和过热。

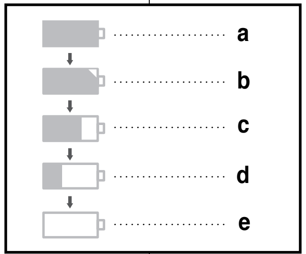
ENGLISH

Preparation

Battery level display

- **The battery level display indicates the amount of power remaining in the battery pack.**

a. Fully charged
b. 20~40% used
c. 40~80% used
d. 80~95% used
e. Completely used (flickers)
(The camcorder will turn off soon, change the battery as soon as possible)



⌘ Please refer to the table on page 23 for approximate continuous recording times.

⌘ The recording time is affected by environmental temperature and conditions.
The recording time becomes very short in a cold environment. The continuous recording times in the operating instructions are measured using a fully charged battery pack at 77°F(25°C). As the environmental temperature and conditions may differ when you actually use the camcorder, the remaining battery time may not be the same as the approximate continuous recording times given in these instructions.

中文

准备

电池电量显示灯

- **电池电量显示灯可指示锂离子电池组的剩余电量。**

a.完全充电
b.消耗20%~40%
c.消耗40%~80%
d.消耗80%~95%
e.消耗100%（闪烁）
（在摄录一体机就要用完电池组的电能时，应尽快对电池充电）

⌘ 请参考23页上的关于近似的连续录制时间的表。

⌘ 录制时间受到与环境温度和条件影响。在冷的环境中，拍摄时间变得非常短。本使用说明书中的连续拍摄时间是在使用完全充足电的电池在77°F（25°C）的条件下测量的。由于您实际使用摄录一体机的条件可能不同，因此实际的连续拍摄时间与表中给出的近似时间可能不同。

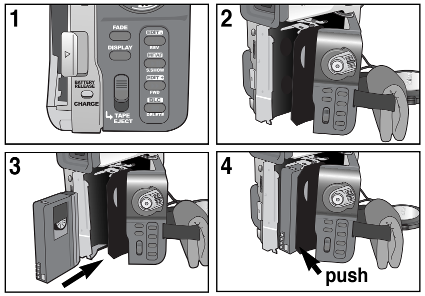
ENGLISH

Preparation

Inserting and Ejecting a Cassette

- There are three types of Mini DV CASSETTE tapes: DVM80, DVM60 and DVM30.
- When inserting a tape or closing a cassette holder, do not apply excessive force. This may cause a malfunction.
- Do not use any tapes other than Mini DV CASSETTES.

1. Connect a power source and slide the TAPE EJECT switch and open the cassette door.
   - The cassette holding mechanism rises automatically.
2. When you see the writing-proof tab, insert a tape into the holder with its window panel outside.
3. Press the area carved PUSH on the cassette holding mechanism until it clicks into place.
   - The cassette is loaded automatically.
4. Close the cassette door.
   - Close the door completely until you can hear a “click” inside. Otherwise it could easily open in the middle of operation so that it may cause a break off.



Reference

When you have recorded something that you wish to keep, you can protect it so that it will not be accidentally erased.

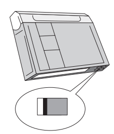
a. Protecting a tape :
Push the safety tab on the cassette so that the hole is uncovered.

b. Removing the tape protection :
If you no longer wish to keep the recording on the cassette, push the write-protect tab back so that it covers the hole.

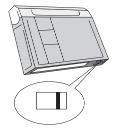
- **How to keep a tape**

a. Avoid places with magnets or magnetic interference.
b. Avoid humidity and dust prone places.
c. Keep the tape in an upright position and avoid storing it in direct sunlight.
d. Avoid dropping or knocking your tapes.

a. SAVE



b. REC



中文

准备

插入和取出磁带

- 有三种类型的微型数字视频盒式磁带:DVM80、DVM60和DVM30。
- 插入磁带或关闭带仓时，不得用力过猛，否则可能导致故障。
- 不得使用不是微型数字视频（DV）盒式磁带的磁带。

1. 连接电源并滑动出带（TAPE EJECT）钮，打开带仓门。
   - 带仓自动打开。
2. 在看到写保护标签时，将盒式磁带插入带仓，使磁带观察窗朝外。
3. 推磁带保持机构上的推动（PUSH）标记，直到盒带咔嗒到位。
   - 磁带自动装上。
4. 关上带仓门。
   - 完全关闭带仓门，直到听到内部“咔哒”一声为止。否则，带仓门会在操作中间很容易地打开，会造成中断。

参考

当您已录好一盒希望保存的磁带时，可以保护好磁带，以防止因意外地抹掉磁带。

a. **保护磁带**:
推动磁带上的安全标签以便小孔不被盖住。

b. **防误抹保护**:
如果不想保存磁带上的内容，推回写保护标签，以便盖住小孔。

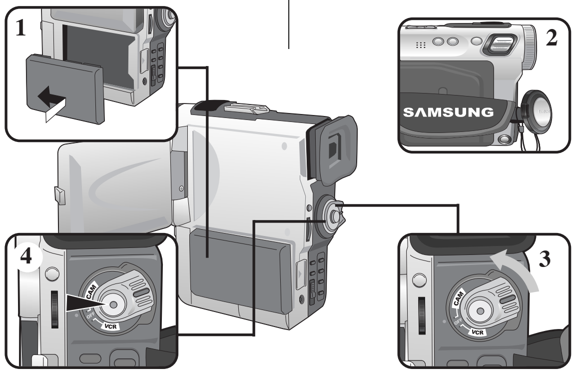
- **如何保存磁带**

a. 避免将其放在有磁体或磁性干扰的场所。
b. 避免将其放在潮湿多尘的场所。
c. 将磁带直立放置，远离直射阳光。
d. 不得使盒式磁带跌落或受到震动。

ENGLISH

Basic Recording

Making your First Recording



1. Connect a Power source to the camcorder. (see page 21) (A battery pack or a AC power adapter)
   - Insert a cassette. (see page 25)
2. Remove the LENS CAP and hook it onto the hand strap.
3. Set the power switch to the CAM position.
   - Open the LCD monitor and make sure that STBY is displayed.
   - If the protection tab of the cassette is open, STOP and PROTECTION! will be displayed.
   - Make sure the image you want to record appears in the LCD monitor or viewfinder.
   - Make sure the battery level indicates that there is enough remaining power for your expected recording time.
4. To start recording, press the START/STOP button.
   - REC is displayed in the LCD.
     To stop recording, press the START/STOP button again.
   - STBY is displayed in the LCD.

中文

基本摄像技术

首次拍摄

1. 将摄录一体机与电源相连。（见 21页）。
   （电池组或交流电源适配器）
   - 装入磁带。（见25页）
2. 打开镜头盖并挂到手带上。
3. 将电源开关置于摄像机位置。
   - 打开液晶显示屏并保证显示STBY（待机）。
   - 如果磁带的保护标签打开，会 显示“STOP&PROTECTION”(停止和保护！)。
   - 保证想拍摄图像出现在液晶显示屏或取景器上。
   - 确保电池电量指示灯显示有足够的电能可用于摄象。
4. 如需开始摄象，按“启动/停止（START/STOP）”钮。
   - 液晶显示屏上显示“REC（录像）”字符。
     如需停止摄像，则再次按“启动/停止（START/STOP）”钮。
   - STBY （待机）显示在液晶显示屏上

ENGLISH

Basic Recording

When a cassette is loaded and the camcorder is left in the STBY mode for more than 5 minutes without being used, it will switch off automatically.
To use it again, push the START/STOP button or set the Power switch to OFF and then back to CAM.
This Auto Power off feature is designed to save battery power.

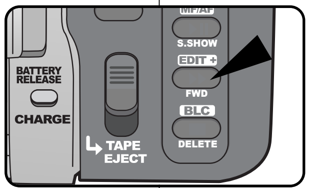
Edit Search

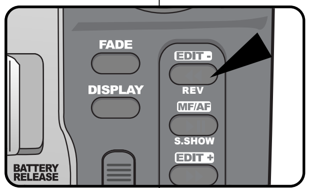
⌘ You can view a recording using the EDIT +, – function in STBY mode.
EDIT – enables you to play the recording backwards and EDIT + enables you to play it forwards, for as long as you keep each button pressed down.

⌘ If you press the EDIT – button quickly in STBY mode, your camcorder will play in reverse for 3 seconds and return to the original position automatically.

Reference

■ Mosaic shaped distortion may appear on the screen while in edit search mode.





中文

基本摄像技术

如已装入盒式磁带，摄录一体机处于“STBY（待机）”模式而闲置时间超过5分钟，就会自动断电。

如需重新使用摄录一体机，推启动/停止（START/STOP）钮或将电源开关置于关闭位置，然后再置于摄像机（CAMERA）位置。

这种自动电源关闭功能是为了节省电池电能而设计的。

编辑查找

⌘ 您可以利用处于STBY（待机）模式下的编辑（EDIT+、-）功能查看已录制的场景。按住向后编辑（EDIT -）钮使您能够向后查看，按住向前编辑（EDIT +）钮使您能够向前查看。

⌘ 如果在STBY（待机）模式下快速按动编辑（EDIT-）钮，摄录一体机将倒放图象3秒钟，再自动回到原来的位置。

参考

■ 在编辑查找模式中，屏幕上会出现马赛克状的失真。

ENGLISH

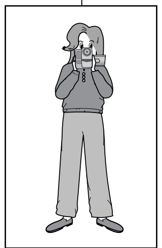
Basic Recording

Hints for Stable Image Recording

■ While recording, it is very important to hold the camcorder correctly.
■ Fix the LENS cap firmly by clipping it to the hand strap. (refer to the figure)

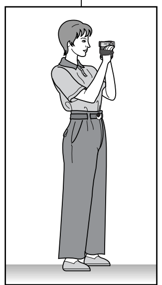
Recording with the LCD monitor

1. Hold the camcorder firmly using the hand strap.
2. Place your right elbow against your side.
3. Place your left hand under or beside the LCD to support and adjust it.
   Do not touch the built-in microphone.
4. Choose a comfortable, stable position for the shots that you are taking.
   You can lean against a wall or on a table for greater stability. Do not forget to breathe gently.
5. Use the LCD frame as a guide to determine the horizontal plane.
6. Whenever possible, use a tripod.



Recording with the Viewfinder

1. Hold the camcorder firmly using the hand strap.
2. Place your right elbow against your side.
3. Place your left hand under the camcorder to support it. Be sure not to touch the built-in microphone.
4. Choose a comfortable, stable position for the shots that you are taking. You can lean against a wall or on a table for greater stability. Do not forget to breathe gently.
5. To view an object through the viewfinder, pull it out until you hear the ‘click’ sound. Excessive force may cause damages to the viewfinder.
6. Place your eye firmly against the viewfinder eyecup.
7. Use the viewfinder frame as a guide to determine the horizontal plane.
8. Whenever possible, use a tripod.



中文

基本摄像技术

拍摄稳定的图像须知

■ 摄象时，正确手持摄录一体机是非常重要的。
■ 将镜头盖锁到手带上牢固地固定住（参见图）

使用液晶显示屏摄像

1. 利用手带牢固地拿住摄录一体机。
2. 将右肘贴紧身体。
3. 将左手放在液晶显示屏下方或侧面，支承并调整液晶显示屏。
   不得触及内置话筒。
4. 选择一个舒适稳定的姿势进行拍摄。
   可以靠在墙壁或桌面上，以提高稳定性。
   不要忘记在拍摄时保持均匀呼吸。
5. 利用液晶显示屏框作为确定水平面的基准。
6. 只要有可能，就应使用三角架。

使用取景器摄像

1. 利用手带牢固地拿住摄录一体机。
2. 将右肘贴紧身体。
3. 将左手放在摄录一体机下方支承。
   不得触及内置话筒。
4. 选择一个舒适稳定的姿势进行拍摄。
   可以靠在墙壁或桌面上，以提高稳定性。
   不要忘记在拍摄时保持均匀呼吸。
5. 若要通过取景器观察物体，将取景器拔出直到听到“咔哒”声。过大的力会损坏取景器。
6. 将眼睛紧贴取景器的眼罩。
7. 利用取景器的框作为确定水平面的基准。
8. 只要有可能，就应使用三角架。

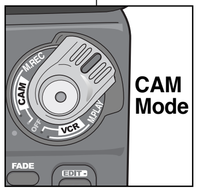
Basic Recording

Adjusting the LCD

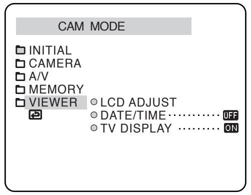
⌘ Your camcorder is equipped with a 2.5 inch color Liquid Crystal Display(LCD) screen, which enables you to view what you are recording or playing back directly.

⌘ Depending on the conditions under which you are using the camcorder (indoors or outdoors for example), you can adjust ;

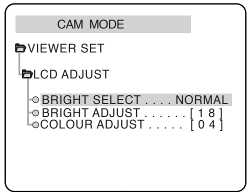
- BRIGHT SELECT
- BRIGHT ADJUST
- COLOUR ADJUST



1. Set the POWER switch to CAM position.
   - In the VCR mode, you may only setup the LCD while the tape is playing.



2. Open the LCD screen, and the LCD switches on.
3. Press the MENU button.
4. Turn the MENU DIAL so that VIEWER is highlighted and that Push the MENU DIAL.
5. Turn the MENU DIAL so that LCD ADJUST is highlighted.
6. Push the MENU DIAL to enter the sub-menu.
7. Turn the MENU DIAL so that it highlights the menu item you want to adjust (BRIGHT SELECT, BRIGHT ADJUST, COLOUR ADJUST).



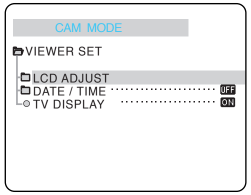
基本摄像技术

调整液晶显示屏

⌘ 摄录一体机装备有2.5英寸彩色液晶显示器（LCD）屏幕，它使您能够直接观看正在拍摄的图像或重放图像。

⌘ 根据您使用摄录一体机时的条件(例如,室内或室外)，可以调整：摄像机模式

- 亮度选择
- 亮度调整
- 色度调整



1. 将电源（POWER）开关设定到摄象机（CAMERA）位置。
   - 在录象机模式，在播放磁带时，只能设置液晶显示屏。
2. 打开液晶显示屏，并打开液晶显示屏开关。
3. 按菜单按钮。
4. 转动菜单调节盘，以便取景器突出显示且推动菜单调节盘。
5. 转动菜单调节盘以便“液晶显示屏调节”突出显示。
6. 推动菜单调节盘，以进入子菜单。
7. 转动菜单调节盘，以便希望调节的菜单项突出显示（亮度选择、亮度调节、色度调节）。

Basic Recording

8. Push the MENU DIAL again.
   - You may select NORMAL or SUPER in the BRIGHT SELECT feature and push the MENU DIAL to save the setting.
   - Use the MENU DIAL to adjust the value of BRIGHT ADJUST and COLOUR ADJUST.
   - You can set values for BRIGHT ADJUST between 00 ~ 35 and COLOUR ADJUST between 00 ~ 07.

9. Press the MENU button to finish the setting.

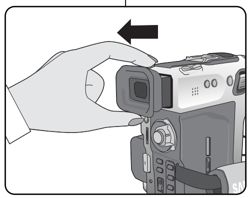
Using the VIEWFINDER

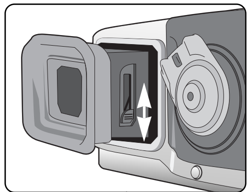
⌘ The VIEWFINDER is not working as long as the LCD is open.

⌘ In order to bring it into focus, pull forward the viewfinder before you use it.

Adjusting the Focus

Use the focus adjustment knob of the VIEWFINDER to focus the picture. (refer to figure)





基本摄像技术

8. 再次推动菜单调节盘。
   - 可在“亮度选择”功能中选择“正常”或“超强”并推动“菜单调节盘”以保存设置。
   - 使用菜单调节盘调节“亮度调整”和“色度调整”值。
   - 可设置“亮度调整”值在00~35之间，“色度调整”值在 00~07。

9. 按下菜单按钮以完成设置。

使用取景器

⌘ 只要液晶显示屏打开，取景器就不工作。

⌘ 为了调节好焦距，在使用取景器之前，向前拉取 景器。

调节焦距

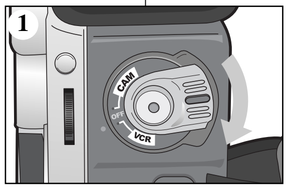
使用取景器的聚焦调节钮，以聚焦图像。(参见图)

Basic Recording

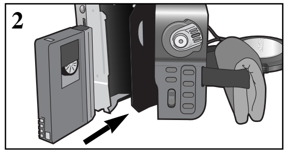
Playing back a tape you have recorded on the LCD

⌘ You can monitor the playback picture on the LCD monitor.
⌘ Make sure that the battery pack is in place.

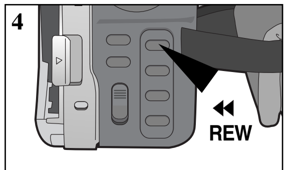
1. Hold down the tab of the Power switch and turn it to the VCR position.



2. Insert the tape you wish to view. (see page 25)



3. Open the LCD screen.
   Adjust the angle of the LCD screen and set the brightness or colour if necessary.
4. Press the ◀◀ (REW) button to rewind the tape to the starting point.
   - To stop rewinding, press the ■ (STOP) button.
   - The camcorder stops automatically after rewinding is complete.
5. Press the ▶/II (PLAY/STILL) button to start playback.
   - You can view the picture you recorded on the LCD.
   - To stop the PLAY operation, press the ■ (STOP) button.



Reference

- You can also view the picture on a TV screen, after connecting the camcorder to a TV or VCR. (see page 66)
- Various functions are available in playback mode. (see page 68)

基本摄像技术

在液晶显示屏上重放录制的磁带

⌘ 您可以从液晶显示屏（LCD）监视播放的图象。
⌘ 保证已将电池组安装到位。

1. 按电源（POWER）开关上的钮，将电源开关设定到摄像机位置。
2. 插入已摄制的磁带。（见25页）
3. 打开液晶显示屏。
   调节液晶显示屏的角度并根据需要设置亮度或色度。
4. 按动快倒 ◀◀（REW）钮，将磁带倒卷到起始点。
   - 如需停止倒带，按停止 ■（STOP）钮。
   - 当盒带倒卷后达其终端位置时，摄录一体机自动停止。
5. 按 ▶/II（播放/静止）钮，开始放像。
   - 您可以在液晶显示屏上观看到已摄制的图像。
   - 如需停止放像操作，按停止 ■（STOP）钮。

参考

- 在将摄录一体机与电视机或摄像机相连后，您也还可在电视机屏幕上监视图象（见66页）。
- 在重放模式下，您可使用各种功能：（见68页）

ENGLISH

Basic Recording

Adjusting the LCD during PLAY

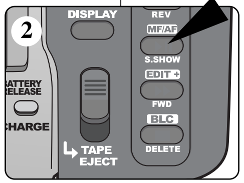
- You can adjust the LCD during playback.
- The adjustment method is the same procedure as used in CAM mode. (see page 29)

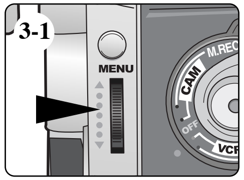
Controlling Sound from the Speaker

The Speaker works in VCR mode only.

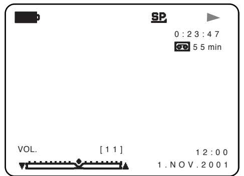
- When you use the LCD screen for playback, you can hear the recorded sound from the built-in Speaker.
  - Follow the instructions below to decrease or mute speaker volume in the VCR mode.
  - Take the following steps to lower the volume or mute the sound while playing a tape on the VCR.

1. Set the power switch to VCR mode.
2. Press ▶/II (PLAY/STILL) to play the tape.
3. When you hear sounds once the tape is in play, use the MENU DIAL to adjust the volume.
   - A volume level display will appear on the LCD. Levels may be adjusted from anywhere between 00 to 19 and you will not hear any sound when the volume is set on 00.
   - If you close the LCD while playing, you will not hear sound from the speaker.





<3-2>



中文

基本摄像技术

在播放期间调节液晶显示屏（LCD）

- 您可在播放过程中调整液晶显示屏。
- 调整方法和摄像机模式操作时相同（见29页）。

控制扬声器的声音

扬声器仅在录象机模式时工作。

- 当您在放像中使用液晶显示屏（LCD）时，还可以听到来自内置扬声器的声音。
  - 按照下面说明在摄像机模式降低扬声器音量或使其静音。
  - 在播放摄像机的磁带时，采取以下步骤降低音量或静音。

1. 将电源开关置于录象机模式。
2. 按下▶/II（播放/静止）以播放磁带。
3. 当听到播放的磁带的声音时，使用菜单调节盘调节音量。
   - 液晶显示屏上会出现音量显示器。可在00到19之间调节音量。在音量被置于00时，会听不到任何声音。
   - 如果在播放时关闭了液晶显示屏，就不会听到扬声器的声音。

ENGLISH

Advanced Recording

Use of various Functions

- **Setting menu items**

MENU	SUB MENU	MODE switch
INITIAL	CLOCK SET REMOCON BEEP SOUND SHUTTER SOUND DEMONSTRATION	C/V/MR/MP C/V/MR/MP C/V/MR/MP MR C
CAMERA	PROGRAM AE WHT. BALANCE D. ZOOM EIS DSE SELECT CUSTOM. Q	C/MR C/MR C/MR C/MR C/MR C/MR
A/V	REC MODE PHOTO SEARCH PHOTO COPY AUDIO MODE AUDIO SELECT WIND CUT	C/V V V C/V V C/V
MEMORY (VP-D190/ D190i only)	QUALITY PRINT MARK PROTECT DELETE FORMAT	V/MR MP MP MP MP
VIEWER	LCD ADJUST DATE/TIME TV DISPLAY	C/V/MR/MP C/V/MR/MP C/V/MR/MP

⌘ C : CAM MODE ⌘ V : VCR MODE
⌘ MR : M.REC MODE ⌘ MP : M.PLAY MODE

- **Set the camcorder to CAM or VCR mode and M.REC or M.PLAY mode (VP-D190/D190i only)**

1. Press the MENU button.
   The MENU OSD is displayed. The cursor (HIGHLIGHT) indicates the feature you are currently adjusting.
2. Using the MENU DIAL and Push the MENU DIAL on the rear side panel, select and activate the item.
3. You can exit the menu mode by pressing the MENU button.

中文

高级录像技术

使用各种功能

- 设置菜单项

菜单	子菜单	模式开关
初始	时钟设置 遥控 蜂鸣音 快门声音 演示	C/V/MR/MP C/V/MR/MP C/V/MR/MP MR C
	摄像机程序自动曝光 白平衡 数字变焦 EIS DSE 选择 自定义	C/MR C/MR C/MR C/MR C/MR C/MR
A/V	录像模式 照片搜索 复制 音频模式 音频选择 风声消除	C/V V V C/V V C/V
记忆 (只限于VP-D190/ 打印标)	质量 打印 保护 删除 格式化	V/MR MP MP MP MP
取景器	液晶显示屏调节 日期/时间 TV显示	C/V/MR/MP C/V/MR/MP C/V/MR/MP

⌘ C :摄像机模式 ⌘ V :录像机模式
⌘ MR :手动录像模式 ⌘ MP :手动播放模式

- **将摄像机设置为摄像机或录像机和手动录像或动动播放模式 (只限于 VP-D190/D190i)**

1. 按菜单按钮.
   菜单选项即会显示. 光标突出显示您当前调整的选项.
2. 使用菜单调节盘选择并激活所需项目.
3. 按菜单按钮可退出菜单项.

Advanced Recording

● Availability of functions in each mode

Requested Mode / Operating Mode	Digital functions			Digital special effects
	EIS	D.ZOOM	PHOTO	
EIS		O	O	O
D.ZOOM	O		O	O
PHOTO	×	×		×
Digital Special Effects	O	O	O	

O : The requested mode will work in this operating mode.
× : You can not change the requested mode.

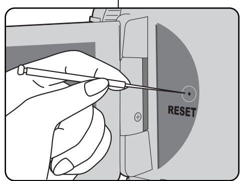
Reference

- When a menu item on the LCD is marked with an X, that item cannot be activated.
- When you select an item that cannot be changed, a guide message will be displayed.

● RESET

⌘ If you push the RESET button, the settings of LCD MENU is changed to the default settings.

⌘ Push the RESET button by using an object with sharp point such as a pin.



高级录像技术

● 每个模式下功能的使用

数字功能 / 要求的模式	数字特殊效果			操作模式
	EIS	数字变焦	照片	
EIS		O	O	O
数字变焦	O		O	O
照片	×	×		×
数字特殊效果	O	O	O	

O ：要求的模式会在该操作模式工作。
× ：您不能改变要求的模式。

参考

- 如果在液晶显示屏上的一个菜单项标有X，则不能激活该项。
- 如果您选择一个不能改变的项，则会显示指导信息。

● 复位

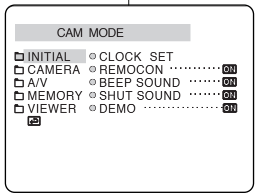
⌘ 如果您按下复位按钮，液晶显示屏的菜单设置就会变回到默认的设置。

⌘ 用带有尖端的物体如大头针推动复位按钮。

Advanced Recording

● CLOCK SET

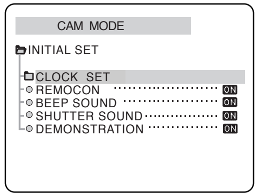
⌘ CLOCK setup works in CAM, VCR, M.REC and M.PLAY modes.
⌘ The DATE/TIME is automatically recorded onto a tape. Before recording, please set the DATE/TIME.



1. Press the MENU button.
   ■ The menu list will appear.

2. Turn the MENU DIAL to highlight INITIAL and Push the MENU DIAL.

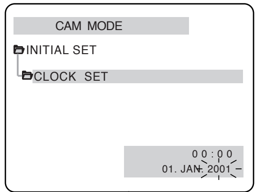
3. Use the MENU DIAL to select CLOCK SET from the submenu.



4. Push the MENU DIAL to enter SETTING mode.
   ■ A blinking item indicates the item to be changed. The year will blink first.

5. Using the MENU DIAL, change the year setting.

6. Push the MENU DIAL.
   ■ The month will blink.



7. Using the MENU DIAL, change the month setting.

8. Push the MENU DIAL.
   ■ The day will blink.

9. You can set the day, hour and minute following the same procedure for setting the year and month.

10. Push the MENU DIAL after setting the minutes.
    ■ The word COMPLETE! will on, and a few seconds later, the menu screen will automatically return to the sub menu.

11. To exit, press the MENU button.

高级录像技术

● 时钟设置

⌘ 时钟设置功能工作在摄像机、录像机、手动录像和手动播放模式。
⌘ 日期/时间会自动录制到磁带上。在录制之前，请设置日期/时间。

1. 按下菜单按钮。
   ■ 会出现菜单列表。

2. 拨动菜单调节盘以使“初始”灯突出显示并推动菜单调节盘。

3. 使用“菜单调节盘”从子菜单选择“时钟设置”。

4. 推动菜单调节盘以进入设置模式。
   ■ 闪烁的项表示可改变的项。首先年份开始闪烁。

5. 使用菜单调节盘，改变年份设置。

6. 推动菜单调节盘。
   ■ 月份开始闪烁。

7. 使用菜单调节盘，改变月份设置。

8. 推动菜单调节盘。
   ■ 日期开始闪烁。

9. 可按照设置年份和月份相同的步骤设置日期、小时和分钟。

10. 在设置分钟后，推动菜单调节盘。
    ■ 会出现“完成”的字样，几秒种后，菜单屏幕自动返回到子菜单。

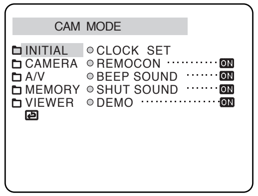
11. 若要退出，按菜单按钮。

Advanced Recording

● REMOCON

- ⌘ THE REMOCON function works in CAM, VCR, M.REC, M.PLAY modes.
- ⌘ The REMOCON option allows you to able or disable the remote control for operating the camcorder.

1. Press the MENU button.
   - ■ The menu list will appear.
2. Turn the MENU DIAL to highlight INITIAL and Push the MENU DIAL.
3. Use the MENU DIAL to select REMOCON from the submenu.
4. Push the MENU DIAL to able or disable the remote control. The setting switches from ON/OFF each time you Push the MENU DIAL.



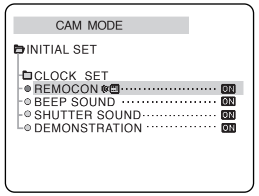
5. To exit, press the MENU button.
   - ■ If you setup the remote control use setup to OFF, when you use a remote control, the remote control icon will blink for 3 seconds and disappear on the LCD.

高级录像技术

● REMOCON（遥控）

- ⌘ REMOCON（遥控）功能工作在摄像机、录像机、手动录像和手动播放模式。
- ⌘ REMOCON（遥控）选项使您能够或禁止遥控器操作摄录一体机。

1. 按下菜单按钮。
   - ■ 会出现菜单列表。
2. 拨动菜单调节盘以使“初始”灯突出显示并推动菜单调节盘。



3. 使用“菜单调节盘”从子菜单选择REMOCON（遥控）。
4. 推动菜单调节盘以使用或禁止遥控器。每次推动菜单调节盘，设置在打开/关闭之间切换。
5. **若要退出，按菜单按钮。**
   - ■ 如果您将遥控器使用设置设置到关闭，在使用遥控器时，遥控器图标会闪烁3秒种并在液晶显示屏上消失。

ENGLISH

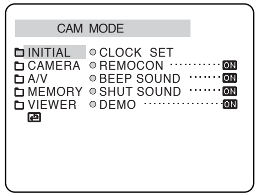
Advanced Recording

● BEEP SOUND

- ⌘ THE BEEP SOUND function works in CAM, VCR, M.REC, M.PLAY modes.
- ⌘ Use the MENU, to setup the BEEP SOUND function. Select whether or not you want to hear a beep sound whenever you change a setup value.

1. Press the MENU button.
   ■ The menu list will appear.

2. Turn the MENU DIAL to highlight INITIAL and push the MENU DIAL.



3. Use the MENU DIAL to select BEEP SOUND from the submenu.

4. Push the MENU DIAL to able or disable the BEEP SOUND. The setting switches from ON/OFF each time you push the MENU DIAL.
   ■ You will hear a Beep Sound when you select the ON setup.
   ■ When you press the START button to get started, the BEEP SOUND is automatically set to OFF so you can't hear it any longer.

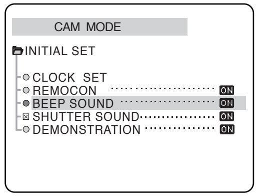
5. To exit, press the MENU button.

中文

高级录像技术

● 蜂鸣音

- ⌘ 蜂鸣音功能工作在摄像机、录像机、手动录像和手动播放模式。
- ⌘ 使用菜单设置蜂鸣音功能。选择在您改变设置值是否想听到蜂鸣音。



1. 按下菜单按钮。
   ■ 会出现菜单列表。

2. 拨动菜单调节盘以使"初始"灯突出显示并推动菜单调节盘。

3. 使用"菜单调节盘"从子菜单选择蜂鸣音。

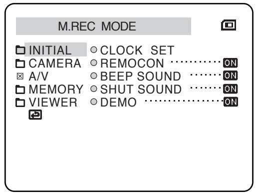
4. 推动菜单调节盘以使用或禁止蜂鸣音功能。每次推动菜单调节盘，设置在打开/关闭之间切换。
   ■ 在您选择打开设置时，会听到蜂鸣音。
   ■ 在您按下启动按钮启动时，蜂鸣音自动设置到关闭，所以您听不到蜂鸣音。

5. 若要退出，按菜单按钮。

Advanced Recording

● SHUTTER SOUND

- ⌘ You can hear SHUTTER SOUND only when the PHOTO function is working.
- ⌘ Determines whether or not you wish to hear a SHUTTER SOUND when filming digital.

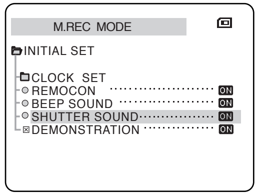


1. Set the camcorder to M.REC mode.
2. Press the MENU button.
   ■ The menu list will appear.
3. Turn the MENU DIAL to highlight INITIAL and push the MENU DIAL.
4. Use the MENU DIAL to select SHUTTER SOUND from the submenu.
5. Push the MENU DIAL to decide if you use SHUTTER SOUND. ON/OFF is shifted every time you push the MENU DIAL.
6. To exit, press the MENU button.

高级录像技术

● 快门声音

- ⌘ 只有在照片功能工作时，您才能听到快门声音。
- ⌘ 在拍摄数字图像时，确定是否想听到快门声音。



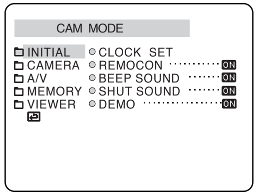
1. 将摄录一体机设置到手动录像模式。
2. 按下菜单按钮。
   ■会出现菜单列表。
3. 拨动菜单调节盘以使“初始”灯突出显示并推动菜单调节盘。
4. 使用“菜单调节盘”从子菜单选择快门声音。
5. 推动菜单调节盘以确定是否使用快门声音功能。每次推动菜单调节盘，该功能在打开/关闭之间切换。
6. 若要退出，按菜单按钮。

ENGLISH

Advanced Recording

● DEMONSTRATION

- ⌘ Demonstration automatically shows you the major functions that are included with your camcorder so that you may use them more easily.
- ⌘ The DEMONSTRATION function may only be used in the CAM mode without a tape inserted in the camcorder.
- ⌘ The demonstration operates repeatedly until the DEMONSTRATION mode switched OFF.



1. Set the camcorder to CAM mode.
2. Press the MENU button.
   ■ The menu list will appear.
3. Turn the MENU DIAL to highlight INITIAL.
4. Select DEMONSTRATION from the submenu and push the MENU DIAL.
5. To activate the DEMONSTRATION set DEMONSTRATION ON.
   ■ Press the menu button to quit the menu.
   ■ The demonstration will begin.
6. To end the DEMONSTRATION, set the DEMONSTRATION to OFF.

Reference

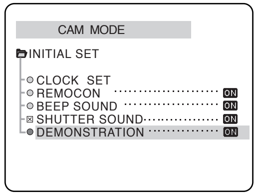
- ■ The DEMONSTRATION function only works without a TAPE installed.
- ■ The DEMONSTRATION mode is automatically activated when the camcorder is left idle for more than 10 minutes after switc-hing to the CAM mode (no tape is inserted in the camcorder).
- ■ If you press other keys (FADE, BLC, PHOTO, EASY, CUSTOM) during the DEMONSTRATION mode, the DEMONSTRATION stops temporarily and the demonstration resume if you do not operate any other functions within 10 minutes.

中文

高级录像技术

● 演示

- ⌘ 演示功能自动向您展示摄录一体机所具有的主要功能以便您轻松地使用这些功能。
- ⌘ 演示功能只能在摄像机模式使用，且摄录一体机内不要放磁带。
- ⌘ 演示功能反复操作直到关闭演示模式。



1. 将摄录一体机设置到摄像机模式。
2. 按下菜单按钮。
   ■会出现菜单列表。
3. 拨动菜单调节盘以使“初始”灯突出显示。
4. 从子菜单中选择演示并推动菜单调节盘。
5. 若要激活演示功能，将演示设置到打开。
   ■ 按下菜单按钮以退出菜单。
   ■ 演示开始。
6. 若要结束演示，将演示设置到关闭。

参考

- ■ 只有在没有装入磁带的情况下，演示功能才工作。
- ■ 在摄录一体机切换到摄像机模式（摄录一体机内没有装入磁带）后闲置超过10分钟，演示模式会自动启动。
- ■ 如果在演示模式期间，您按下其它键（淡、背光补偿、照片、简易、自定义），演示暂时停止，且如果您在10分钟内不使用其它功能，演示功能会恢复。

ENGLISH

Advanced Recording

● PROGRAM AE

- The PROGRAM AE function works in CAM or M.REC mode only.
- The PROGRAM AE mode allows you to adjust shutter speeds and apertures to suit different shooting conditions.
- They give you creative control over the depth of field.

■ AUTO mode
- Auto balance between the subject and the background.
- To be used in normal conditions.
- The shutter speed automatically varies from 1/50 to 1/250 per second, depending on the scene.

■ SPORTS mode ( )
- For recording people or objects moving quickly.

■ PORTRAIT mode ( )
- For focusing on the background of the subject, when the background is out of focus.
- The PORTRAIT mode is most effective when used outdoors.
- The shutter speed automatically varies from 1/50 to 1/1000 per second.

■ SPOTLIGHT mode ( )
- For recording correctly when there is only light on the subject and not the rest of the picture.

■ SAND/SNOW mode ( )
- For recording when people or objects are darken than the background because of reflected light from sand or snow.

■ HSS mode ( )
- For recording fast-moving subjects such as players in golf or tennis games.

中文

高级录像技术

● 程序自动曝光

- 程序自动曝光（PROGRAM AE）功能仅在摄象机（CAM）或手动录像（M.REC）模式时工作。
- 程序自动曝光（PROGRAM AE）模式使您能按照不同的拍摄条件调整快门速度和光圈。
- 这样，就使您能对景深进行创造性的控制。

■ 自动模式
- 使被摄体与背景之间自动平衡。
- 在正常条件下使用。
- 根据被摄场景，快门速度可在每秒1/50至1/250之间自动改变。

■ 运动（SPORT）( ) 方式
- 拍摄快速移动的人或被摄体。

■ 肖象（PORTRAIT）( ) 方式
- 在背景没有聚焦时，聚焦于被摄体的背景。
- 在室外拍摄时使用肖像方式最为有效。
- 快门速度可在每秒1/50至1/1000范围内自动改变。.

■ 聚光灯模式 ( )
- 用于只有被摄体上有光而图像其余部分没有光的情况下正确地录像。

■ 沙滩/雪地模式 ( )
- 用于录制由于沙子或积雪反射的光而使被摄的人或物体比背景暗的情况。

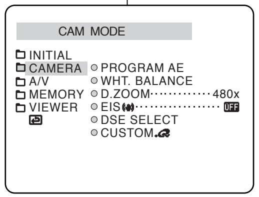
■ HSS（高速快门）( ) 方式
- 用于拍摄快速移动的被摄体，例如高尔夫或网球运动员的比赛姿态。

Advanced Recording

Setting the PROGRAM AE

1. Press the MENU button.
   ■ The menu list will appear.

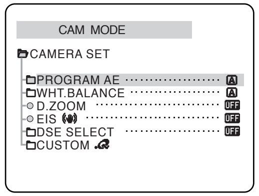
2. Turn the MENU DIAL to highlight CAMERA and Push the MENU DIAL.

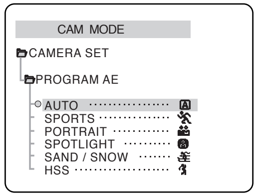


3. Select PROGRMA AE from the submenu.

4. Push the MENU DIAL to enter the sub-menu.

5. Using the MENU DIAL, select the PROGRAM AE mode.
   ■ Push the MENU DIAL to confirm the PROGRAM AE mode.





6. To exit, press the MENU button.

高级录像技术

设置程序自动曝光（PROGRAM AE）

1. 按下菜单按钮。
   ■ 会出现菜单列表。

2. 拨动菜单调节盘以使“摄像机”灯突出显示并推 动菜单调节盘。

3. 从子菜单选择“程序自动曝光”。

4. 推动菜单调节盘以进入子菜单。

5. 使用菜单调节盘，选择“程序自动曝光”模式。
   ■ 推动菜单调节盘以确认“程序自 动曝光”模式。

6. 若要退出，按下菜单按钮。

ENGLISH

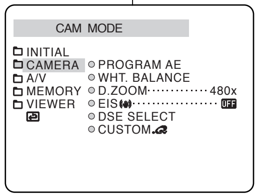
Advanced Recording

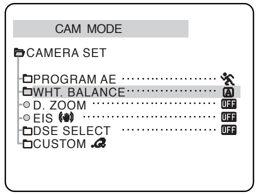
● WHT. BALANCE (WHITE BALANCE)

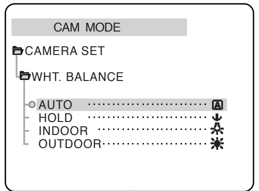
- The WHITE BALANCE function works in CAM or M.REC mode only.
- The WHITE BALANCE is a recording function that preserves the unique color of the object in any recording condition.
- You may select the appropriate WHITE BALANCE mode to obtain good quality color of the image.

- ■ AUTO (A) : This mode is generally used to control the WHITE BALANCE automatically.
- ■ HOLD ( ) :This fixes the current WHITE BALANCE value.
- ■ INDOOR ( ) : This controls the WHITE BALANCE according to the indoor ambience.
- ■ OUTDOOR ( ) : This controls the WHITE BALANCE according to the outdoor ambience.

1. Set the camcorder to CAM mode.
2. Press the MENU button.
   - ■ The menu list will appear.
3. Turn the MENU DIAL to highlight CAMERA and Push the MENU DIAL.
4. Select WHT.BALANCE from the submenu.
5. Push the MENU DIAL to enter the sub-menu.
6. Using the MENU DIAL, select the WHITE BALANCE mode.
   - ■ Push the MENU DIAL to confirm the WHITE BALANCE mode.
7. To exit, press the MENU button.







中文

高级录像技术

● 白平衡（WHITE BALANCE）

- 白平衡功能仅在摄象机（CAM）或手动录像（M.REC）模式时工作。
- 白平衡功能是在任何条件下保持被摄体的独有色彩的拍摄功能。
- 您可选择合适的白平衡方式来获得图象色彩的优良质量。

- ■ 自动（AUTO）(A)：这种方式一般在自动控制白平衡时使用。.
- ■ 保持（HOLD）( )：这种方式固定当前的白平衡值。
- ■ 室内（INDOOR）( )：这种方式按照室内的环境控制白平衡。
- ■ 室外（OUTDOOR）( )：这种方式按照室外的环境控制白平衡。

1. 将摄录一体机置于摄像机模式。
2. 按下菜单按钮。
   - ■ 会出现菜单列表。
3. 拨动菜单调节盘以使“摄像机”灯突出显示并推动菜单调节盘。
4. 从子菜单选择白平衡。
5. 推动菜单调节盘以进入子菜单。
6. 使用菜单调节盘，选择白平衡模式。
   - ■ 推动菜单调节盘以确认白平衡模式。
7. 若要退出，按下菜单按钮。

ENGLISH

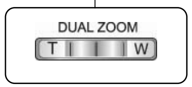
Advanced Recording

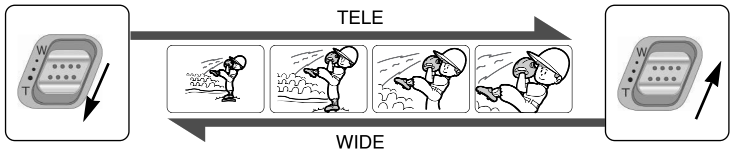
Zooming In and Out with DIGITAL ZOOM

⌘ Zoom works in CAM/M.REC mode only.

Zooming In and Out

⌘ The VP-D130/D130i/D190/D190i model offers a DUAL Zoom system for added convenience.
⌘ Zooming is a recording technique that lets you change the size of the subject in a scene.
For more professional looking recordings, do not use the zoom function too often.
⌘ You can zoom using variable zoom speeds.
⌘ Use these features for different shots. Please note that over use of the zoom feature can lead to unprofessional looking results and a reduction of battery usage time.
⌘ The dual zoom lever has the same function of the normal zoom lever but takes more time for zooming in and out. It is useful to use the dual zoom lever when you need a detailed zooming in and out.





1. Move the zoom lever slightly for a gradual zoom, move it further for a high-speed zoom. Your zooming is monito- red on the OSD.
2. T(Telephoto) side: Subject appears closer.
3. W(Wide angle) side: Subject appears farther away.

Reference

You can record a subject that is a minimum of 1 m (about 2.65 feet) away from the lens surface in the TELE position, or about 10 mm (about 0.5 inch) away in the WIDE position.

中文

高级录像技术

采用数字变焦拉和推

⌘ 变焦功能仅在摄象机/手动录像模式时工作。

拉近和推远

⌘ VP-D130/D130i/D190/D190i 型为了更加方便拍摄提供了双变焦系统。
⌘ 变焦是一种拍摄技术，它可使您改变场景中被摄体的大小。
为了得到更像专业水平的拍摄效果，不要过多地使用变焦功能。
⌘ 您可使用可变变焦速度进行变焦。
⌘ 对各种不同的拍摄情况使用这些功能。请注意，过多地使用变焦会使拍摄结果看起来不专业，并减少电池的寿命。
⌘ 双变焦杆与普通的变焦杆具有相同的功能，但需要更多的时间拉近和推远。在需要详细的拉近和推远时，使用双变焦杆非常有用。

1. 如需逐步变焦，将变焦杆稍移动一点；如需快速变焦，将变焦杆多移动一点。您可在在屏显示（OSD）中监视变焦情况。
2. T（远）侧：被摄体看起来近一些。
3. W（广角）侧：被摄体看起来远。

参考

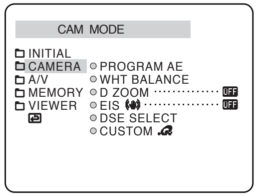
您可在TELE（远）的位置，拍摄到离镜头表面最近为1米(约2.65英尺）的物体；在WIDE（广角）的位置拍摄10毫米(约0.5英寸）远的物体。

Advanced Recording

Digital Zoom

- More than 12x zoom is achieved digitally.
- The picture quality may deteriorate depending on how much you zoom in on the subject.
- We recommend that you use the EIS feature with DIGITAL ZOOM for picture stability. (see page 45)

1. Set the camcorder to CAM or M.REC mode.
2. Press the MENU button.
   ■ The menu list will appear.
3. Turn the MENU DIAL to CAMERA and push the MENU DIAL.
4. Select D.ZOOM from the submenu.
5. Push the MENU DIAL to setup the 480x digital zoom function or to turn the feature OFF.
6. To exit, press the MENU button.



Reference

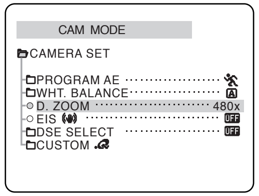
■ If you use the digital zoom function, the picture quality may suffer relatively.

高级录像技术

数字变焦

- 超过12倍的变焦是以数字方式执行的。
- 取决于推近物体的程度，图像质量会下降。
- 我们建议您在使用数字变焦功能时，也使用数字稳定图象（EIS）功能来保证图象稳定性。(见45页)

1. 将摄录一体机置于摄像机或手动录像模式。
2. 按下菜单按钮。
   ■ 会出现菜单列表。
3. 拨动菜单调节盘到摄像机并推动菜单调节盘。
4. 从子菜单选择数字变焦。



5. 推动菜单拨号盘以设置480倍的数字变焦功能或关闭该功能。
6. 若要退出，按下菜单按钮。

参考

■ 如果您使用数字变焦（DIGITAL ZOOM）功能，图象质量可能变差。

ENGLISH

Advanced Recording

● EIS (Electronic Image Stabilizer)

⌘ The EIS function works in CAM/M.REC mode only.
⌘ EIS(Electronic Image Stabilizer) is a function that compensates for any shaking or hand movement while holding the camcorder (within reasonable limits).
⌘ It provides more stable pictures when:
- ■ Recording a small object close-up
- ■ Recording and walking at the same time
- ■ Recording through the window of a vehicle

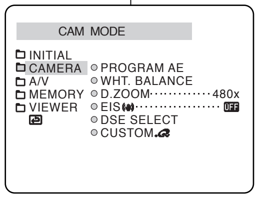
1. Set the camcorder to CAM mode.

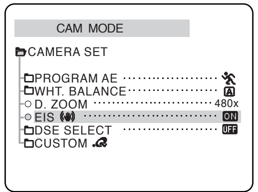
2. Press the MENU button.
   ■ The menu list will appear.

3. Turn the MENU DIAL highlight to CAMERA and push the MENU DIAL.
   ■ The sub menu list will appear.

4. Turn the MENU DIAL to activate the EIS function, push the MENU DIAL.
   ■ The EIS menu is changed to ON.
   ■ If you do not want to use the EIS function, set the EIS menu to OFF.

5. To exit, press the MENU button.





Reference

■ It is recommended that you deactivate the shake compensation function when using a tripod.
■ If you use the EIS function, the picture quality may suffer relatively.

中文

高级录像技术

● 电子图象稳定（EIS）

⌘ 电子图象稳定（EIS）功能仅在摄象机/手动录像模式时工作。
⌘ 电子图象稳定（EIS）功能用来补偿拿住摄录一体机时的手抖或移动（在合理限度内）。
⌘ 它在下列情况下提供更为稳定的图像：
- ■ 拍摄小物体的特写镜头
- ■ 边走边拍摄
- ■ 通过车辆的窗口拍摄

1. 将摄录一体机置于摄像机模式。

2. 按下菜单按钮。
   ■ 会出现菜单列表。

3. 拨动菜单调节盘以使“摄像机”灯突出显示并推动菜单调节盘。
   ■ 会出现子菜单列表。

4. 转动菜单调节盘以激活EIS功能，推动菜单调节盘。
   ■ EIS菜单变为打开。
   ■ 如果您不想使用EIS功能，将EIS菜单设置为关闭。

5. 若要退出，按下菜单按钮。

参考

■ 建议您在使用三角架时，停用手抖补偿功能。
■ 如果您使用电子稳定图象（EIS）功能，图象质量可能会有所下降。

ENGLISH

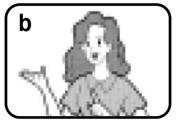
Advanced Recording

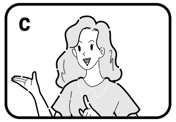
● DSE(Digital Special Effects) SELECT

- ⌘ The DSE function works in CAM and M.REC mode only.
- ⌘ The digital effects enable you to give a creative look to your recording by adding various special effects.
- ⌘ Select the appropriate digital effect for the type of picture that you wish to record and the effect you wish to create.
- ⌘ There are 9 DSE modes.

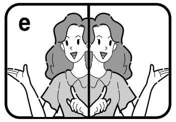
a. ART mode
This mode gives the images a coarse effect.
b. MOSAIC mode
This mode gives the images a mosaic effect.
c. SEPIA mode
This mode gives the images a reddish-brown pigment.
d. NEGA mode
This mode reverses the colors of the images creating a negative image.
e. MIRROR mode
This mode cuts the picture in half, using a mirror effect.
f. BLK & WHT mode
This mode changes the images to black and white.
g. EMBOSS mode
This mode creates a 3D effect (embossing).
h. CINEMA mode
This mode covers the upper/lower portions of the screen to give a cinematic effect.
i. MAKE - UP mode
This mode allows the images to be selected in red, green, blue or yellow colors.

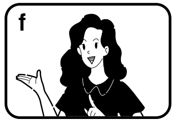




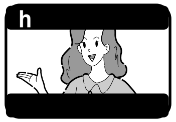


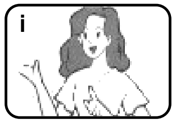












中文

高级录像技术

● DSE(数字特殊效果)选择

- ⌘ 数字特殊效果功能仅在摄象机和手动录像模式时工作。
- ⌘ 数字特殊效果可为您在拍摄的图象中增加各种特技效果，使拍摄的图象创意新颖。
- ⌘ 对您需拍摄的图象选择您所需的合适的数字特殊效果类型和想建立的效果。
- ⌘ 有9种DSE模式。

a. 艺术模式
该模式给图像一种粗略的效果。
b. 马赛克（MOSAIC）模式
该模式赋予图像马赛克效果。
c. 仿旧模式
该模式赋予图像深褐色色质。
d. 负像（NEGA）模式
该模式使拍摄的图像的色彩反转，建立负片。
e. 镜像（MIRROR）模式
这种方式将图像切去一半，产生镜像效果。
f. 黑白（B/W）模式
该模式使图像变为黑白的。
g. 浮雕模式（EMBOSS）
该模式建立三维效果(浮雕).
h. 影院（CINEMA）模式
该模式盖住屏幕的上部/下部以提供电影的效果。
i. 虚构模式
该模式允许用红色、绿色、兰色或黄色选择图像。

ENGLISH

Advanced Recording

Selecting an effect

1. Set the camcorder to CAM mode.

2. Press the MENU button.
   ■ The menu list will appear.

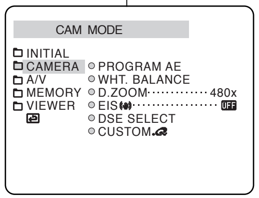
3. Turn the MENU DIAL to highlight CAMERA and push the MENU DIAL.

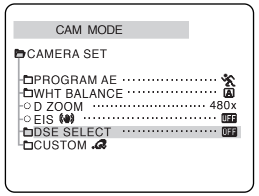
4. Select DSE SELECT from the submenu.

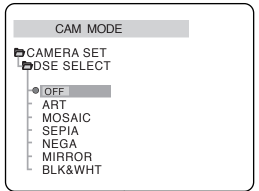
5. Push the MENU DIAL to enter the sub-menu.

6. Using MENU DIAL, select the DSE mode.
   ■ Push the MENU DIAL to confirm the DSE mode.

7. To exit, press the MENU button.







中文

高级录像技术

选择效果

1. 将摄录一体机置于摄像机模式。

2. 按下菜单按钮。
   ■ 会出现菜单列表。

3. 拨动菜单调节盘以使“摄像机”灯突出显示并推动菜单调节盘。

4. 从子菜单选择“DSE选择”。

5. 推动菜单调节盘以进入子菜单。

6. 使用菜单调节盘，选择DSE模式。
   ■ 推动菜单调节盘以确认DSE模式。

7. 若要退出，按下菜单按钮。

ENGLISH

Advanced Recording

● CUSTOM.Q

⌘ You can customize settings and save them for future use.
  ■ The CUSTOM.Q function operates in the CAM and M.REC mode.

⌘ If you want to use the CUSTOM.Q function (see page 58) correctly, set the status of each item as desired before using the CUSTOM.Q function.

⌘ You can set and store the following items:
  ■ PROGRAM AE, WHT.BALANCE, D.ZOOM, EIS, DSE SELECT

1. Set the power switch to CAM mode.

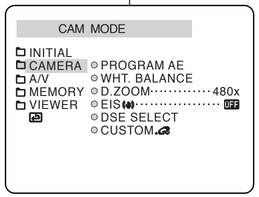
2. Press the MENU button.
   ■ ENU list will appear.

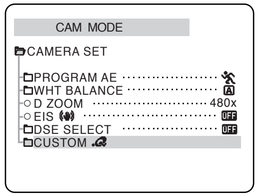
3. Turn the MENU DIAL, select CAMERA position and push the MENU DIAL.

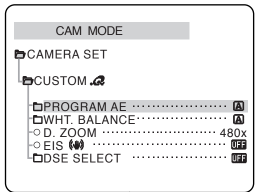
4. Select CUSTOM.Q using MENU DIAL in the submenu and push the MENU DIAL.

5. Using the MENU DIAL and push the MENU DIAL, set the status of each item as desired.

6. To exit the menu, press the MENU button.







Reference

■ If you want to activate the CUSTOM.Q function, press the CUSTOM.Q button while in CAM mode.

■ The PROGRAM AE mode is automatically setup when the EXPOSURE is set on manual.

中文

高级录像技术

● 自定义Q（CUSTOM.Q）

⌘ 您可自定义设置并保存以为将来使用。
  ■ 自定义Q（CUSTOM.Q）工作在摄像机和手动录像模式。

⌘ 如果您想正确地使用自定义Q（CUSTOM.Q）功能（见58页），在使用自定义Q（CUSTOM.Q）功能之前根据需要设置每一项的状态。

⌘ 您可设置并保存以下各项:
  ■ 程序自动变焦（PROGRAM AE）、白平衡（WHT.BALANCE）、数字变焦（D.ZOOM）、EIS、数字特技效果选择（DSE SELECT）

1. 将电源开关置于摄像机模式。

2. 按下菜单按钮。
   ■ 会出现菜单列表。

3. 拨动菜单调节盘，选择“摄像机”位置并推动菜单调节盘。

4. 使用子菜单中的菜单调节盘选择自定义Q（CUSTOM.Q）并推动菜单调节盘。

5. 使用菜单调节盘并推动菜单调节盘，根据需要设置每一项的状态。

6. 若要退出菜单，按下菜单按钮。

参考

■ 如果想激活自定义Q（CUSTOM.Q）功能，在摄像机模式按下自定义Q（CUSTOM.Q）按钮。

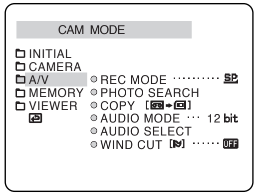
■ 在曝光置于手动时，程序自动曝光模式被自动设置。

Advanced Recording

● REC MODE

⌘ The REC MODE function works in both CAM and VCR modes.
⌘ This camcorder records and plays back in SP (standard play) mode and in LP (long play) mode.
- ■ SP (standard play): This mode permits 60 minutes of recording time with a DVM60 tape.
- ■ LP (long play): This mode permits 90 minutes of recording time with a DVM60 tape.

1. Set the camcorder to CAM or VCR mode.
2. Press the MENU button.
   - ■ The menu list will appear.
3. Turn the MENU DIAL to highlight A/V and push the MENU DIAL.
4. Select REC MODE from the submenu and push the MENU DIAL.
   - ■ The REC MODE toggles between SP and LP with each push.
5. To exit, press the MENU button.



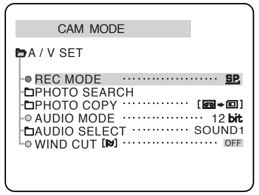
Reference

- ■ We recommend that you use this camcorder to play back any tapes recorded on this camcorder.
  Playing back a tape recorded in other equipment may produce mosaic shaped distortion.
- ■ When you record in SP and LP modes on a tape or you record only some scenes in the LP mode, the playback picture may be distorted or the time code may not be written properly between scenes.
- ■ Record using SP mode for best picture and sound quality.

高级录像技术

● 录像模式

⌘ 录像模式（REC MODE）功能既工作在摄像机模式又工作在录像机模式。
⌘ 本摄录一体机在SP（标准播放）模式和LP（长时播放）模式录制和播放。
- ■ **标准播放（SP）**：该模式允许使用DVM60磁带录制60分钟的时间。
- ■ **长时播放（LP）**：该模式允许使用DVM60 磁带录制90分钟时间。



1. 将摄录一体机置于摄像机或录像机模式。
2. 按下菜单按钮。
   - ■ 会出现菜单列表。
3. 拨动菜单调节盘，使A/V突出显示并推动菜单调节盘。
4. 从子菜单选择录像模式（REC）并推动菜单调节盘。
   - ■ 每按一下，录像模式在标准播放和长时播放之间切换。
5. 若要退出，可按菜单按钮.

参考

- ■ 我们建议使用本摄录一体机重放用本摄录一体机录制的磁带。重放用其它设备录制的磁带可能产生马赛克状的失真。
- ■ 如果以标准播放和长时播放模式录制磁带或在长时播放模式只录制一些场景，重放图像可能失真或时间代码不能正确地写入各个场景之间。
- ■ 为了获得最佳的图像和声音质量，使用标准播放模式。

ENGLISH

Advanced Recording

● **AUDIO MODE**

- The AUDIO MODE function works in CAM and VCR modes.
- This camcorder records sound in two ways. (12bit, 16bit)
  - 12bit : You can record two 12bit stereo sound tracks.
    The original stereo sound can be recorded onto the MAIN (SOUND1) track.
    Additional stereo sound can be dubbed onto the SUB (SOUND2) track.
  - 16bit : You can record one high quality stereo sound using the 16bit recording mode.
    Audio dubbing is not possible when using this mode.

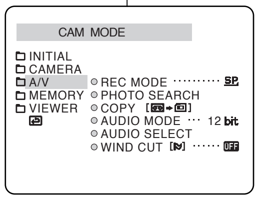
1. Set the camcorder to CAM mode.

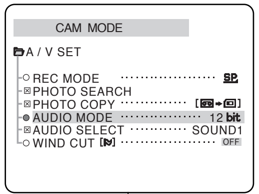
2. Press the MENU button.
   - The menu list will appear.

3. Turn the MENU DIAL to highlight A/V and push the MENU DIAL.

4. Select the AUDIO MODE from the menu and push the MENU DIAL.
   - The AUDIO MODE toggles between 12bit-16bit with each push.

5. To exit, press the MENU button.





中文

高级录像技术

● 音频模式

- 音频模式功能既工作在摄像机模式又工作在录像机模式。
- 本摄录一体机采用两种方式录制声音。(12位，16位)
  - 12位：您可录制两个12位立体声磁迹。
    原始立体声可录制在主（MAIN)（声音1）磁迹上。
    附加的立体声可录制在副 （SUB）（声音2）磁迹上。
  - 16位：您可用16位模式录制高品质的立体声。用这种模式时，不能配音。

1. 将摄录一体机置于摄像机模式。

2. 按下菜单按钮。
   - 会出现菜单列表。

3. 拨动菜单调节盘，使A/V突出显示并推动菜单调节盘。

4. 从菜单选择音频模式并推动菜单调节盘。
   - 每按一下，音频模式在12位-16位之间切换。

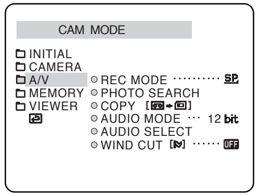
5. 若要退出，按下菜单按钮。

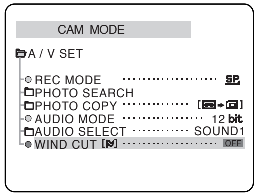
Advanced Recording

● WIND CUT

- ⌘ The WIND CUT function works in CAM and VCR modes.
- ⌘ The WIND CUT function minimizes wind noise or other noise while recording.
  - When the wind cut is on, some low sounds are eliminated along with the sound of the wind.

1. Set the camcorder to CAM mode.
2. Press the MENU button.
   ■ The menu list will appear.
3. Turn the MENU DIAL to highlight A/V and push the MENU DIAL.
4. Select WIND CUT from submenu.
5. This feature toggles ON/OFF each time you push the MENU DIAL.
6. To exit, press the MENU button.





高级录像技术

● 风声消除（WIND CUT）

- ⌘ 风声消除（WIND CUT）功能在摄像机模式和录像机模式。
- ⌘ 风声消除功能最小化录制时的风噪声或其它噪声。
  - 当风声消除功能打开时，一些低的声音连同风声被消除了。

1. 将摄录一体机置于摄像机模式。
2. 按下菜单按钮。
   ■ 会出现菜单列表。
3. 拨动菜单调节盘，使A/V突出显示并推动菜单调节盘。
4. 从子菜单选择风声消除。
5. 每按一次菜单调节盘，该功能在打开/关闭之间切换。
6. 若要退出，按下菜单按钮。

Advanced Recording

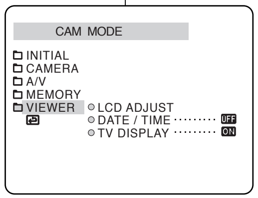
● DATE/TIME

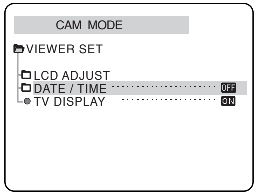
- The DATE/TIME function works in CAM, VCR, M.REC and M.PLAY modes.
- The date and time are automatically recorded on a special data area of the tape.
- You can choose to display - the OFF, DATE, TIME, DATE/TIME
  - ■ OFF only
  - ■ DATE only
  - ■ TIME only
  - ■ DATE & TIME

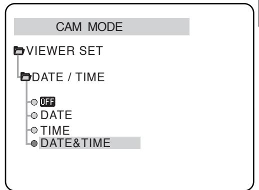
1. Press the MENU button.
   - ■ The menu list will appear.
2. Turn the MENU DIAL to highlight VIEWER and push the MENU DIAL.
3. Turn the MENU DIAL to highlight DATE/TIME.
4. Push the MENU DIAL to select the sub-menu.
5. Using the MENU DIAL, select the DATE/TIME mode.
   - To return to the previous menu, place the cursor on the return icon located at the lower part of the menu and Push the MENU DIAL.
6. To exit, press the MENU button.

Reference

- ■ The DATE/TIME is not affected by the OSD ON/OFF (DISPLAY) button.
- ■ The DATE/TIME will read "- - -" in the following conditions.
  - During playback of a blank section of a tape.
  - If the tape was recorded before setting the DATE/TIME in the Camera's memory.
  - When the battery becomes weak or dead.







高级录像技术

● 日期/时间（ATE/TIME）

- 日期/时间功能工作在摄像机、录像机、手动录像和手动播放模式。
- 日期和时间自动录制在磁带的特殊数据区域。
- 您可以选择显示—关闭、日期、时间、日期/时间
  - ■ 仅关闭
  - ■ 仅日期
  - ■ 仅时间
  - ■ 仅日期和时间

1. 按下菜单按钮。
   - ■ 会出现菜单列表。
2. 转动菜单调节盘以使取景器突出显示并推动菜单调节盘。
3. 转动菜单调节盘以使日期/时间突出显示。
4. 推动菜单调节盘以选择子菜单。
5. 使用菜单调节盘，选择日期/时间模式。
   - -若要返回上一菜单，将光标放在位于菜单下部的返回图标上，并推动菜单调节盘。
6. 若要退出，按下菜单按钮。

参考

- ■ 日期/时间不受在屏显示打开/关闭（显示）按钮的影响。
- ■ 在下列条件下，日期/时间会出现"- - -"。
  - 在重放磁带的空白段时。
  - 如果在摄像机记忆中设置日期/时间之前，磁带已录制。
  - 在电池电量不足或没电时。

ENGLISH

Advanced Recording

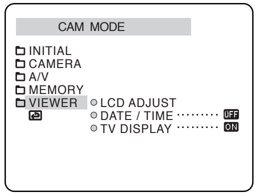
TV DISPLAY

- The TV DISPLAY function works in CAM, VCR, M.REC, M.PLAY modes.
- You can select the output path of the OSD (On Screen Display).
  - OFF: The OSD appears in the LCD screen only.
  - ON: The OSD appears in the LCD screen, EVF and TV.
  - Use the DISPLAY button located at the rear of the camcorder to turn ON/OFF all of the OSD displayed on the LCD/EVF/TV.

1. Set the camcorder to CAM, VCR, M.REC, M.PLAY mode.

2. Press the MENU button.
   - The menu list will appear.

3. Turn the MENU DIAL to highlight VIEWER and push the MENU DIAL.



4. Select the TV DISPLAY mode in list, push the MENU DIAL.
   - The DISPLAY mode switches between ON/OFF with each push.

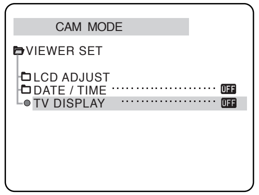
5. To exit, press the MENU button.

中文

高级录像技术

电视显示（TV DISPLAY）

- 电视显示功能工作在摄像机、录像机、手动录像、手动播放模式。
- 您可以选择在屏显示的输出路径。
  - 关闭：在屏显示只出现在液晶显示屏上。
  - 打开：在屏显示出现在液晶显示屏、EVF和电视上。
  - 使用摄录一体机后面的显示按钮，打开/关闭液晶显示屏/EVF/电视上的在屏显示。



1. 将摄录一体机置于摄像机、录像机、手动录像、手动播放模式。

2. 按下菜单按钮。
   - 会出现菜单列表。

3. 转动菜单调节盘以使取景器突出显示并推动菜单调节盘。

4. 从列表中选择电视显示模式，推动菜单调节盘。
   - 每按一次，显示模式在打开/关闭之间切换。

5. 若要退出，按下菜单按钮。

Advanced Recording

Using Quick Menu

⌘ Quick menu is available only in CAM mode.
⌘ Quick menu is used to adjust to camera environments that are easily changing subject to photographing circumstances, working by the MENU DIAL manipulation.

■ **DATE/TIME**
- Each time you select DATE/TIME and press the MENU DIAL, it'll be displayed in the order of DATE - TIME - DATE/TIME - OFF(See page 52).

■ **REMOCON( )**
- Each time you select REMOCON and press the MENU DIAL, the REMOCON is switched to either enabled( ) or disabled(OFF) .

■ **EIS( )**
- Each time you select EIS and press the MENU DIAL, the EIS icon is displayed or set to OFF.

■ **DSE(Digital Special Effect) (see page 46)**
- Each time you select DSE and press the MENU DIAL, the preset values of DSE is applied or set to OFF. You can't change the values unless you preset values for DSE.

■ **PROGRAM AE (see page 40)**
- Each time you select PROGRAM AE and press the MENU DIAL, the preset PROGRAM AE values and AUTO are switched to each other. You can't change the values unless you preset the PROGRAM AE values.

高级录像技术

使用快 捷菜单

⌘ 快捷菜单只在摄像机模式可使用。

⌘ 快捷菜单通过操纵菜单调节盘工作，用于调节到摄像机环境，该环境易受拍摄情况的影响而变化。

■ **日期/时间**
-每次您选择日期/时间并按菜单调节盘，会按日期—时间—日期/时间—关闭的顺序显示（见52页）。

■ **遥控( )**

-每次您选择遥控并按菜单调节盘，遥控就切换到启动或禁止。

■ EIS( )

-每次您选择EIS并按菜单调节盘，则显示EIS图标或置于关闭。

■ **DSE(数字特殊效果) (见46页)**
-每次您选择DSE并按菜单调节盘，则应用DSE的预设值或置于关闭。除非为DSE预设了数值，否则不能改变数值。

■ **程序自动曝光 (见40页)**
-每次您选择程序自动曝光并按菜单调节盘，预设的程序自动曝光和自动会互相切换。除非为程序自动曝光预设了数值，否则不能改变数值。

Advanced Recording

高级录像技术

■ **WHT. BALANCE(see page 42)**
- Each time you select WHT. BALANCE and press the MENU DIAL, preset WHT.BLANCE values and AUTO are switch- ed to each other. As similar in the PROGAM AE, you can't change the values unless you preset the WHT.BLANCE values,.

■ **SHUTTER SPEED & EXPOSURE**
- You can set values for SHUTTER SPEED and EXPOSU-RE by selecting ( ) icon and pressing the MENU DIAL. For more information, see the next chapter.

Setting the Quick menu

1. Set the camcorder to CAM mode.

2. Turn the MENU DIAL.
   ■ You'll see EIS icon first.

3. Turn the MENU DIAL to select a function you want and then press the MENU DIAL to change the values to your favor.

■ 白平衡(见42页)
- 每次您选择白平衡并按菜单调节盘，预设的白平衡值和自动会互相切换。与程序自动曝光类似，除非您预设了白平衡值，否则就不能改变数值。

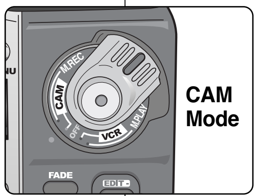
■ 快门速度和曝光
- 通过选择 ( ) 图标和按菜单调节盘，可为快门速度和曝光设置数值。有关详细信息，参见下一章。

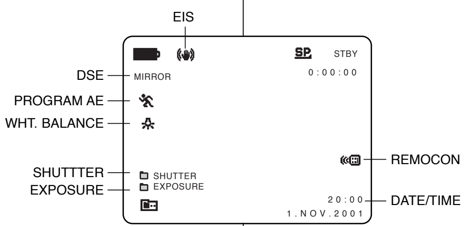
设置快捷菜单

1. 将摄像机置于摄像机模式。

2. 转动菜单调节盘。
   ■ 会首先见到EIS图标。

3. 转动菜单调节盘以选择需要的功能并按菜单调节盘以按需要改变数值。





ENGLISH

Advanced Recording

SHUTTER SPEED & EXPOSURE

- ⌘ You can set SHUTTER SPEED and EXPOSURE only in CAM mode.
- ⌘ SHUTTER SPEED and EXPOSURE are necessary only when you are working on the photographing so you can set them only through the QUICK MENU.
- ⌘ SHUTTER SPEED and EXPOSURE are automatically switched and/or deactivated.
- ⌘ When MANUAL EXPOSURE/SHUTTER SPEED is activated under where EXPOSURE is automatically activated, AUTO EXPOSURE becomes deactivated.

1. Set the power switch to CAM mode.

2 Turn the MENU DIAL until you see icon on, and then press the MENU DIAL.
   - ■ You see a screen on which you can select SHUTTER SPEED and EXPOSURE.
   - ■ Turn the MENU DIAL to select the item you want and then press the MENU DIAL.
   - ■ SHUTTER SPEED is available in 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000 or 1/10000.
   - ■ EXPOSURE is available in between 00 and 29.

3. To exit from the setting screen, select the icon and press the MENU DIAL.

Reference

- ■ If you want to use the selected shutter speed and exposure value, you should begin the recording with the shutter speed and the exposure adjustment screens displayed on the LCD.
- ■ If you manually change the shutter speed and the exposure value when Auto-exposure option is selected, manual changes are applied first.

中文

高级录像技术

快门速度和曝光

- ⌘ **只能在摄像机模式设置快门速度和曝光功能。**
- ⌘ 只有在您拍摄时，才需要快门速度和曝光功能，所以您能够通过快捷菜单设置。
- ⌘ 快门速度和曝光自动切换或失效。
- ⌘ 在手动曝光/快门速度启动时，其中曝光自动启动，自动曝光失效。

1. 将电源开关置于摄像机模式。

2 转动菜单调节盘直到见到 图标出现，然后按菜单调节盘。
   - ■ 您会见到一个屏幕，在上面可选择快门速度和曝光。
   - ■ 转动菜单调节盘以选择需要的项，然后按菜单调节盘。
   - ■ 可使用的快门速度有1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000或1/10000。
   - ■ 曝光可位于00和29之间。

3. 若要从设置屏幕退出，选择图标 并按菜单调节盘。

参考

- ■ 如果您想使用选择的快门速度和曝光值，应该通过显示在液晶显示屏上快门速度和曝光调节屏幕开始拍摄。
- ■ 如果在选择了自动曝光选项时，手动改变了快门速度和曝光值，则手动改变值首先生效。

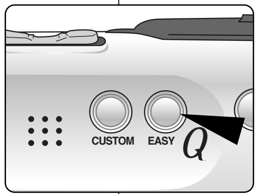
ENGLISH

Advanced Recording

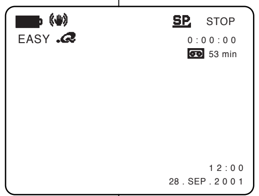
EASY Mode (for Beginners)

⌘ The EASY mode allows a beginner to make good recordings easily.
- The EASY mode only operates in CAM mode.

1. Set the power switch to CAM mode.



2. By pressing the EASY button, all functions on the camera will be set to off and the recording settings will be set to the following basic modes:
   - Battery level, recording mode, counter, DATE/TIME, and EIS ( ) will be displayed.
   - The word “EASY.Q” will appear on the LCD at the same time. However, the DATE/TIME will only be seen if it has been previously set. (see page 52)



3. Press START/STOP to start recording.
   - Recording will begin using the basic automatic settings.

4. Pressing the EASY button again turns the EASY mode off.
   - The camera will return to the settings that were set prior to activating EASY mode.

Reference

- In EASY mode, certain functions are not available, such as MENU, BLC, MF/AF.
  - If you want to use these functions, you must first switch the EASY mode off.
- The EASY mode settings are deleted when the battery is uninstalled from the camcorder and therefore, they must be reset when a battery has been replaced.

中文

高级录像技术

简易模式（EASY）(用于初学者)

⌘ 简易模式使初学者能够简易地拍摄好图像。
- 简易模式只在摄像机模式工作。

1. 将电源开关置于摄像机模式。

2. 通过按下简易按钮，摄像机上的所有功能都被关闭且录像设置会被置于以下基本模式：
   - 会显示电池电量、录制模式、计数器、日期/时间和EIS。( )
   - “简易Q ”字样会出同时现在液晶显示屏上。然而，只有在以前设置了日期/时间，才会见到日期/时间。(见52页）

3. 按启动/停止开始拍摄。
   - 拍摄会采用基本自动设置开始。.

4. 再次按下简易按钮，将简易模式关闭。
   - 摄像机会返回到激活简易模式前的设置。

参考

- 在简易模式，某些功能不能使用，如菜单、背光补偿、手动聚焦/自动聚焦。
  - 如果您想使用这些功能，必须首先将简易模式关闭。
- 如果摄录一体机的电池被取出，简易模式设置会被删除，因此在更换电池时，必须重新设置。

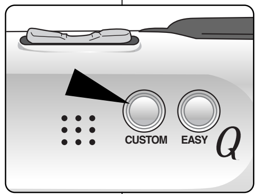
ENGLISH

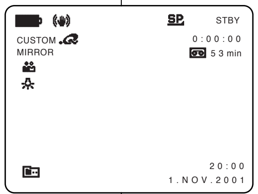
Advanced Recording

CUSTOM Mode

- You can customize settings and save them for future use.
  - ■ The CUSTOM SET function operates in CAM mode only.
- Please set the custom settings before using this function. (see page 48)

1. Set the power switch to CAM mode.
2. To activate the CUSTOM function, press the CUSTOM button.
   - ■ “CUSTOM.Q” will be displayed on the screen.
3. Press START/STOP to start recording.
   - ■ Recording will begin using the CUSTOM settings.
4. To switch CUSTOM mode off, press the CUSTOM button again.
   - ■ The camcorder will revert to the settings that were set prior to custom mode being selected.





Reference

■ The CUSTOM mode settings are deleted when a battery is uninstalled and therefore they must be reset when a battery has been replaced.

中文

高级录像技术

自定义模式

- 您可自定义设置并保存以为将来使用。
  - ■ 自定义设置功能只在摄像机模式工作。
- 在使用该功能之前，请设置自定义设置。(见48页)

1. 将电源开关置于摄像机模式。
2. 若要激活自定义功能，按自定义按钮。
   - ■ 屏幕上会出现“自定义Q”。
3. 按启动/停止以开始拍摄。
   - ■ 使用自定义设置开始拍摄。
4. 若要关闭自定义模式，再按自定义按钮。
   - ■ 摄录一体机会返回到选择自定义设置之前的设置。

参考

■ 如果摄录一体机的电池被取出，自定义模式设置会被删除，因此在更换电池时，必须重新设置。

Advanced Recording

MF/AF (Manual Focus/Auto Focus)

- The MF/AF function works in CAM and M.REC mode only.
- In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.
- Manual focusing may be necessary under certain conditions that make automatic focusing difficult and/or unreliable.

Auto Focusing

- If you are inexperienced in the use of camcorders, we recommend that you make use of Auto Focus.

Manual Focusing

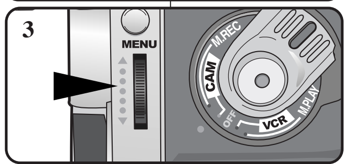
- In the following cases you could obtain better results by adjusting the focus manually.

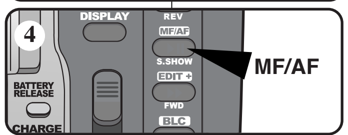
a. A picture containing several objects, some close to the camcorder, others further away.
b. A person enveloped in fog or surrounded by snow.
c. Very shiny or glossy surfaces like a car.
d. People or objects moving constantly or quickly like an athlete or a crowd.

1. Set the power switch to CAM mode.
2. Press the MF/AF(▶/❚❚) button.
3. Turn the MENU DIAL up or down until the object is in focus.
   ■ Zoom out a little if focusing is difficult.
4. To return to AF(Auto Focus), press the MF/AF button again.



2


3


4


高级录像技术

自动聚 焦/手动聚 焦（AF/ MF）

- 自动聚焦/手动聚焦（AF/MF）工作在摄像机和手动录像模式。
- 在大部分情况下，最好使用自动聚焦功能，因为它可使您集中精力在拍摄的创意上。
- 在某些条件下，自动聚焦很难和/或不可靠，可能必须使用手动聚焦。

自动聚焦

- 如果您对摄录一体机的使用不太熟悉，建议您采用自动聚焦方式。

手动聚焦

- 在下列情况下，采用手动调整焦距会获得更好的结果。

a. 画面中有若干被摄体，一些被摄体靠近摄录一体机，另一些被摄体则远离摄录一体机。
b. 人被雾气笼罩或四面皆雪。
c. 光亮耀眼夺目的表面，例如，小汽车。
d. 始终在移动或快速移动的人或被摄体，如运动员或人群。

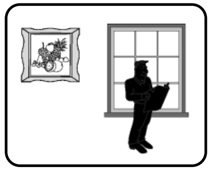
1. 将电源开关置于摄像机模式。
2. 按手动聚焦/自动聚焦(▶/❚❚)按钮。
3. 向上或向下转动菜单调节盘，直到聚焦了被摄体。
   ■ 如果很难聚焦，则稍稍推远一点。
4. 若要返回到AF(自动聚焦)，再次按手动聚焦/自动聚焦（MF/AF）。

Advanced Recording

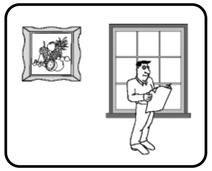
BLC (Back Light Compensation)

- BLC works in CAM/M.REC mode.
- Back lighting exists when the subject is darker than the background:
  - The subject is in front of a window.
  - The person to be shot is wearing white or shiny clothes and is placed against a bright background; the person's face is too dark to distinguish his/her features.
  - The subject is outdoors and the background is overcast.
  - The light sources are too bright.
  - The subject is against a snowy background.

* BLC off

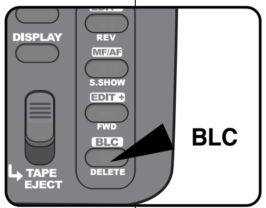


* “背光补偿”打开



1. Set the power switch to CAM mode.

2. Press the BLC button.
   - Normal - BLC - Normal
   - BLC only enhances the subject.



高级录像技术

背光补偿（BLC）

- 背光补偿（BLC）在摄象机/手动录像模式时工作。
- 当被摄体比背景暗时存在背光：
  - 被摄体位于窗前。
  - 被摄人物身着白色或闪亮的服装，身后是明亮的背景，人物的面孔过暗以致无法辩认其特征。
  - 被摄体在室外，背景是阴暗的天空。
  - 光源太亮。
  - 被摄体背景白雪皑皑。

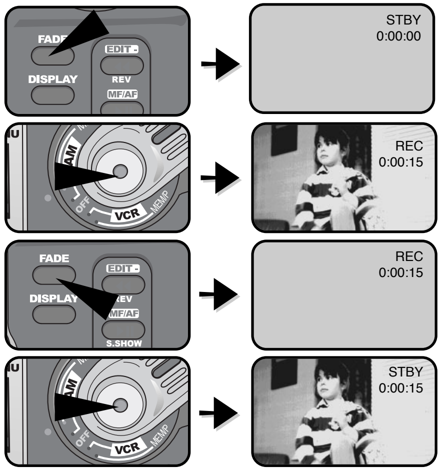
1. 将电源开关置于摄像机模式。

2. 按背光补偿按钮。
   - 正常? 背光补偿? 正常
   - 背光补偿仅对被摄体增强曝光。

Advanced Recording

Fade In and Out

- The FADE function works in CAM mode only.
- You can give your recordings a professional look by using special effects such as fading in at the beginning of a sequence or fading out at the end of a sequence.

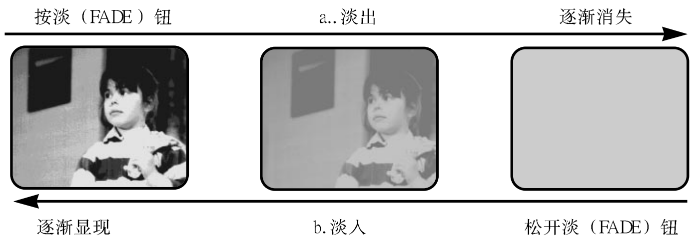


To Start Recording

1. Before shooting, hold down the FADE button. The picture and sound gradually disappear (fade out).
2. Press the START/STOP button and at the same time release the FADE button. Recording starts and the picture and sound gradually appear (fade in).

To Stop Recording (use FADE IN / FADE OUT)

3. When you wish to stop-shooting, hold down the FADE button. The picture and sound gradually disappear (fade out).
4. When the picture has disappeared, press the START/STOP button to stop recording.



a. FADE OUT (Approx. 4 seconds)
b. FADE IN (Approx. 4 seconds)

高级录像技术

淡入和淡出

- 淡功能仅在摄象机（CAM）模式时工作。
- 为使拍摄的节目达到专业化水准，可以使用一些特技效果，例如在一个片断的启动时用淡入手法，在结束时采用淡出手法。

启动录制

1. 启动摄象前，按住淡（FADE）钮。图像和声音逐渐消失（淡出）。
2. 按启动/停止（START/STOP）钮，同时松开淡（FADE）钮。启动摄像，图象和声音逐渐显现（淡入）。

停止录制（使用淡入/淡出功能）

3. 当您需停止录像时，按下淡（FADE）钮。图象和声音逐渐消失（淡出）
4. 图象消失后，按下启动/停止（START/STOP）钮，停止摄象。

a. 淡出（约4秒钟）
b. 淡入（约4秒钟）

ENGLISH

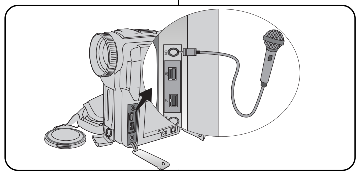
Advanced Recording

Audio dubbing

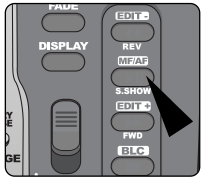
- ⌘ The AUDIO DUBBING function only works in VCR Mode.
- ⌘ You can add sound to the original sound on a pre-recorded tape, recorded in SP mode with 12bit sound.
- ⌘ Use the internal and external microphones or other audio equipment.
- ⌘ The original sound will not be erased.

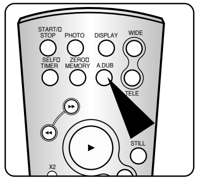
Record the sound again using MIC dubbing.

1. Set the camcorder to VCR mode.
   - ■ If you want to use the external microphone, connect the microphone to the external MIC input jack on the camcorder.
   - ■ When you wish to dub using the External A/V input, connect theAUDIO /VIDEO cable to the camcorder by inserting the cable jack into the A/V in/out terminal at the left side of the camcorder.



2. Press the ▶/II (PLAY/STILL) button and find the timeframe of the scene to be dubbed.
3. Press the ▶/II (PLAY/STILL) button to pause the scene.
4. Press the A.DUB button on the Remote Control.
   - ■ A.DUB will be displayed on the LCD.
   - ■ The camcorder is in a ready-to-dub state for dubbing.





5. Press the ▶/II(PLAY/STILL) button to start dubbing.
   - Press the ■ (STOP) button to stop the dubbing.

Reference

- ■ You can not use the audio dubbing function while playing the video tape which is protected to write.
- ■ When you wish to dub using the External A/V input, you must connect the AUDIO/VIDEO cable to the audio system from which you wish to record.
- ■ You can not use the audio dubbing function while the A/V calbe is connected to TV.

中文

高级录像技术

配音

- ⌘ 配音（AUDIO DUBBING）功能仅在录像机模式时工作。
- ⌘ 您可在预先录制的磁带上添加配音到原声上，在12位声标准播放录制。
- ⌘ 使用内置话筒和外接话筒或其它音频设备。
- ⌘ 不会抹除原有的声音。

使用话筒配音再次录制声音

1. 将摄录一体机置于录像机模式。
   - ■ 如果您想使用外接话筒，将话筒连接到摄录一体机的外接话筒输入插口上。
   - ■ 如果您想使用外接A/V输入配音，连接音频/视频电缆到摄录一体机上，将电缆插头插入到摄录一体机左侧的A/V输入/输出端子上。
2. 按下▶/II（播放/静止）按钮并找到待配音的场景的时间范围。
3. 按下 ▶/II（播放/静止）按钮以暂停场景。
4. 按下遥控器上的配音按钮。
   - ■ 液晶显示屏上会显示配音。
   - ■ 摄录一体机处于配音准备就绪状态。
5. 按下▶/II（播放/静止）按钮开始配音。
   - 按■（STOP）停止按钮，停止配音。

参考

- ■ 在播放有写保护的录像带时，不能使用配音功能。
- ■ 如果您想使用外接A/V输入配音时，必须连接音频/视频电缆到音频系统上，从系统上录制。
- ■ 在A/V电缆连接到电视上时，不能使用配音功能。

ENGLISH

Advanced Recording

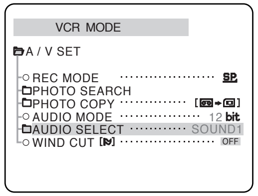
Dubbed Audio Playback

1. Insert the dubbed tape and press MENU button.

2. Turn the MENU DIAL to highlight A/V.

3. Push the MENU DIAL to enter the sub-menu.

4. Use the MENU DIAL to select AUDIO SELECT from the submenu.



5. Push the MENU DIAL to enter the sub-menu.

6. Using the MENU DIAL, select the AUDIO playback channel.
   - ■ Push the MENU DIAL to confirm the audio playback channel.
   - SOUND1 : play the original sound.
   - SOUND2 : play the dubbed sound.
   - MIX(1+2) : playback an equally mixed sound of SOUND1 and 2.

7. To exit, press the MENU button.

8. Press the ▶/II (PLAY/STILL) button to playback the dubbed tape.

Reference

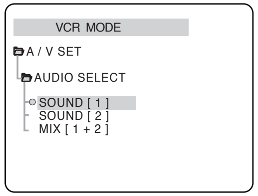
■ When you playback added sound (SOUND2 or MIX mode), you may experience loss of sound quality or broken sounds.

中文

高级录像技术

重放配音

1. 插入已配音的盒带并按菜单（MENU）钮。



2. 转动菜单调节盘使A/V突出显示。

3. 推动菜单调节盘以进入子菜单。

4. 使用菜单调节盘从子菜单选择“音频选择”。

5. 推动菜单调节盘以进入子菜单。

6. 使用菜单调节盘，选择音频重放声道。
   - ■ 推动菜单调节盘以确认音频播放声道。
   - 声音1：播放原声。
   - 声音2：重放配音。
   - 混合(1+2)：播放均等混合的声音1和2。

7. 若要退出，按菜单按钮。

8. 按 ▶/II （播放/静止）按钮以重放配音磁带。

参考

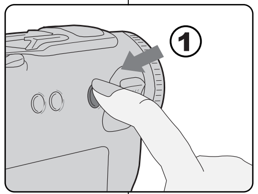
■ 在您重放添加的声音（声音2或混合模式），会感到音质下降或断音。

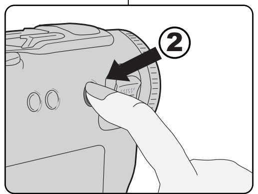
ENGLISH

Advanced Recording

PHOTO Image Recording

1. Press the PHOTO Button lightly (about halfway down) and hold it.
   ■ The still picture appears on the LCD monitor.
   ■ If you do not wish to record, simply release the pressure from the button.
2. Press the PHOTO button fully down.
   ■ The still picture is recorded for about 6~7 seconds.
3. After the PHOTO has been recorded, the camcor- der returns to STBY mode.



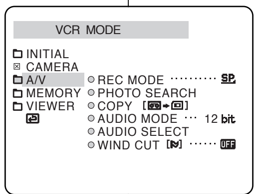


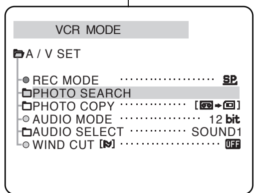
Reference

■ If you use the PHOTO function, you may experience inferior picture quality.

Searching for a PHOTO picture

⌘ The PHOTO SEARCH works in VCR, M.PLAY mode only.
1. Press the MENU button.
   ■ The menu list will appear.
2. Turn the MENU DIAL to highlight A/V.
3. Push the MENU DIAL to enter the sub-menu.
4. Select PHOTO SEARCH from the submenu and Push the MENU DIAL.
5. Search the PHOTO using the ▶▶ (FWD) and ◀◀ (REW) buttons.
   ■ The PHOTO search process appears on the LCD while you are searching.
   ■ After completing the search, the camcorder displays the still image.
6. To exit, press the ■ (STOP) button.





中文

高级录像技术

拍摄照片

1. 轻轻按下照片按钮（约按一半）并保持住。
   ■ 液晶显示屏上会出现静止的图像。
   ■ 如果您不想拍摄，只需松开按钮。
2. 完全按下照片按钮。
   ■ 静止图像会被拍摄约6~7秒钟。
3. 在拍摄完照片后，摄录一体机返回到待机模式。

参考

■ 如果您使用照片功能，图像的质量会下降。

查找照片

⌘ 照片查找功能仅工作在录像机、手动播放模式。
1. 按菜单按钮。
   ■ 会出现菜单列表。
2. 转动菜单调节盘以使A/V突出显示。
3. 推动菜单调节盘以进入子菜单。
4. 从子菜单选择照片搜索并推动菜单调节盘。
5. 使用 ▶▶ （快进）(FWD)和 ◀◀ （快倒）按钮来查找照片。
   ■ 在您查找时，液晶显示屏上会出现照片查找过程。
   ■ 在完成查找后，摄录一体机会显示静止图像。
6. .若要退出，按 ■ （停止）按钮。

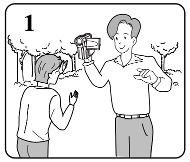
Advanced Recording

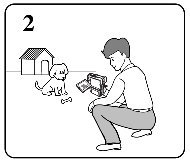
Various Recording Techniques

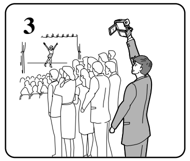
⌘ In some situations different recording techniques may be required for more dramatic results.

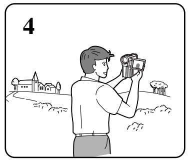
Reference

Please rotate the LCD screen carefully as excessive rotation may cause damage to the inside of the hinge that connects the LCD screen to the Camcorder.









1. General recording.

2. Downward recording.

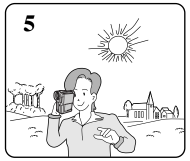
Making a recording with a top view of the LCD screen.

3. Upward recording.

Making a recording viewing the LCD screen from below.

4. Self recording.

Making a recording viewing the LCD screen from the front.



Reference

When the LCD screen faces towards the front, indicators are turned off.

5. Recording with the Viewfinder.

In circumstances where it is difficult to use the LCD monitor, the viewfinder can be used as a convenient alternative.

高级录像技术

各种拍摄技巧

⌘ 在某些情况下，采用各种不同的拍摄技巧会得到令人印象深刻的效果。

参考

请小心地旋转液晶显示屏，因为过度旋转可能损坏连接液晶显示屏与摄录一体机的铰链的内部机构。

1.一般录像

2.俯视录像

从上向下俯视液晶显示屏进行摄像。

3.仰视录像

从下向上仰视液晶显示屏进行摄像。

4.自拍

从前方观察液晶显示屏进行摄像。

参考

当液晶显示屏朝向**前方时，指示灯全部关闭**。

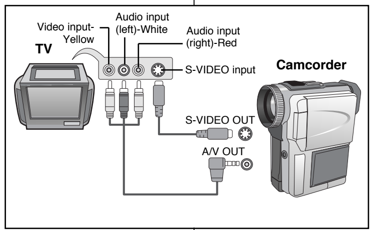
5. 利用取景器摄像

在难以使用液晶显示屏的情况下，可将使用取景器作为便利的代用方案。

ENGLISH

Advanced Recording

Tape Playback



⌘ To watch a recorded tape.

⌘ The playback function works in VCR mode only.

Playback on the LCD

⌘ It is practical to view a tape using the LCD in a car or outdoors.

Playback on a TV monitor

⌘ To play back a tape, the Television must have a compatible colour system.

⌘ We recommend that you use the AC Power Adapter as the power source for the camcorder.

Connecting to a TV which has Audio/Video input jacks

1. Connect the camcorder and TV with the Audio/Video cable.
   - ■ The yellow plug : Video
   - ■ The white plug : Audio(L)
   - ■ The red plug : Audio(R) - STEREO only
     - If you connect to a monaural TV or VCR, connect the yellow plug (Video) to the video input of the TV or VCR and the white plug (Audio L) to the audio input of the TV or VCR.

⌘ You may use the supplied SCART adapter.

2. Set the power switch on the camcorder to VCR mode.
3. Turn on the TV and set the TV/VIDEO selector on the TV to VIDEO.
   - ■ Refer to the TV or VCR user's manual.
4. Play the tape back.

Reference

- ■ You may use the S-VIDEO cable to obtain better quality pictures if you have a S-VIDEO connector on your TV.
- ■ Even if you use a S-VIDEO cable, you need to connect an audio cable.

中文

高级录像技术

录像带的重放

⌘ 观看录制的磁带。

⌘ 重放功能只工作在录像机模式。

在液晶显示屏上重放

⌘ 在汽车中或户外利用液晶显示屏观看录像带是切实可行的。

利用电视机重放

⌘ 为了重放录象带，电视机必须具有兼容彩色制式的功能。

⌘ 建议将交流电源适配器用作摄录一体机的电源。

将摄录一体机与有音频和视频输入插口的电视机连接

1. 使用音频/视频电缆将摄录一体机与电视相连。
   - ■ 黄色插头：视频
   - ■ 白色插头：音频（左）
   - ■ 红色插头：音频（右）—只限于立体声
     - 如果您连接到单声道电视或录像机上，将黄色插头（视频）连接到电视或录像机的视频输入端，并将白色插头（音频左）连接到电视或录像机的音频输入上。

⌘ 您可使用随机器提供的SCART适配器。

2. 将摄录一体机上的电源开关置于录像机模式。
3. 打开电视并将电视上的电视/视频选择器置于视频。
   - ■ 参见电视或录像机用户手册。
4. 重放录像带。

参考

- ■ 如果您的电视机有S－VIDEO连接器，则可以使用S－VIDEO电缆，以获得质量更佳的图象。
- ■ 即使使用S－VIDEO电缆，也必须连接一条音频电缆。

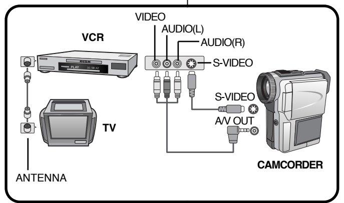
ENGLISH

Advanced Recording

Connecting to a TV which has no Audio and Video input jacks

⌘ You can connect your camcorder to a TV through a VCR.

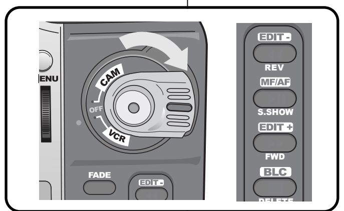
1. Connect the camcorder and VCR with the Audio/Video cable.
   - ■ The yellow plug : Video
   - ■ The white plug : Audio(L)
   - ■ The red plug : Audio(R) - STEREO only
2. Connect a TV to the VCR.
3. Set the power switch on the camcorder to VCR mode.
4. Turn on both the TV and VCR.
   - ■ Set the input selector on the VCR to LINE.
   - ■ Select the channel reserved for your VCR on the TV set.
5. Play the tape back.



Playback

⌘ You can play the recorded tape in VCR mode.

1. Connect a power source and set the power switch to VCR mode.
2. Insert the tape you wish to play back.
3. Using the ▶▶ (FWD) and ◀◀ (REW) buttons, find the first position you wish to play back.
4. Press the ▶/II (PLAY/STILL) button.
   - ■ The images you recorded will appear on the TV after a few seconds.
   - ■ If a tape reaches its end while being played back, the tape will rewind automatically.



Reference

- ■ It is best to decrease the volume of the built-in speaker when your camcorder is connected to the TV.
- ■ The playback mode (SP/LP) is selected automatically.

中文

高级录像技术

连接到有音频和视频输入插座的电 视上

⌘ 可通过录像机将摄录一体机与电视相连。

1. 使用音频/视频电缆将摄录一体机与录像机相连。
   - ■ 黄色插头：视频
   - ■ 白色插头：音频（左）
   - ■ 红色插头：音频（右）—只限于立体声
2. 连接电视到摄像机上。
3. 将摄录一体机上的电源开关置于录像机模式。
4. 打开电视和录像机。
   - ■ 将录像机上的输入选择器置于视频。
   - ■ 在电视机上选择为录像机预留的频道。
5. 重放录像带。

重放

⌘ 可在录像机模式播放录制的磁带。

1. 连接电源并将电源开关置于录像机模式。
2. 装入想重放的录像带。
3. 使用▶▶（快进）和◀◀（快倒）按钮，找到想重放的第一个位置。
4. 按下▶/II（播放/静止）按钮。
   - ■ 几秒后，您录制的图像会出现在电视上。
   - ■ 如果录像带在播放到达了尽头，录像带会自动倒带。

参考

- ■ 在将摄录一体机连接到电视上时，最好降低内置话筒的音量。
- ■ 重放模式 (标准播放/长时播放)会自动选择 。

Advanced Recording

Various Functions while in VCR mode

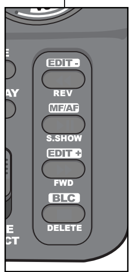
- The PLAY/STILL, STOP, FWD, REW buttons are located on the camcorder and the Remote Control.
- The F.ADV(Frame advance), X2, SLOW buttons are located on the Remote Control only.
- To prevent tape and head-drum wear, your camcorder will automatically stop if it is left in STILL or SLOW modes for more than 5 minutes.

Playback pause

- Press the ▶/II (PLAY/STILL) button during Playback or Slow playback.
- To resume playback, press the ▶/II (PLAY/STILL) button.

Picture search (Forward/Reverse)

- Press the ▶▶ (FWD) or ◀◀ (REW) buttons once during Playback or Still mode.
  To resume normal playback, press the ▶/II (PLAY/STILL) button.
- Keep pressing ▶▶ (FWD) or ◀◀ (REW) buttons during Playback or Still mode.
  To resume normal playback, release the button.



Slow playback (Forward/Reverse)

- Forward Slow Playback
  - Press the SLOW button on the remote control during Playback.
  - To resume normal playback, press the ▶/II (PLAY/STILL) button.
- Reverse slow playback
  - Press the ◀◀ (REW) button during Forward Slow Play back.
  - To resume forward slow playback, press the ▶▶ (FWD) button.
  - To resume normal playback, press the ▶/II (PLAY/STILL) button.

高级录像技术

录像机 模式的各种功能

- 摄录一体机和遥控器上有播放/静止、停止、快进、快倒按钮。
- 仅在遥控器上有帧步进（F.ADV）、X2、慢放（SLOW）钮。
- 为了防止录像带和磁鼓磨损，如果摄录一体机在静止或慢放模式超过5分钟，就会自动停止。

重放暂停

- 重放或慢放时，按 ▶/II （播放/静止）钮。
- 如需恢复重放，再次按 ▶/II （播放/静止）钮。

图像搜索 (快进/快倒)

- 重放过程中或静止模式时按住 ▶▶ 快进（FF）或 ◀◀ 快倒（REW）钮。
  如需恢复正常放像，按 ▶/II (播放/静止）按钮。
- 重放或静止模式期间按 ▶▶ 快进（FF）或 ◀◀ 快倒（REW）钮。
  如需恢复正常播放，释放按钮即可。

慢放 (向前/向后)

- 向前慢放
  - 在播放期间按下遥控器上慢放按钮。
  - 如需恢复正常重放，按 ▶/II （播放/静止）钮。
- 向后慢放
  - 在向前慢放期间按下 ◀◀ (快倒)按钮。
  - 如需恢复向前慢放，按下 ▶▶ （快进）按钮。
  - 如需恢复正常重放，按 ▶/II （播放/静止）钮。

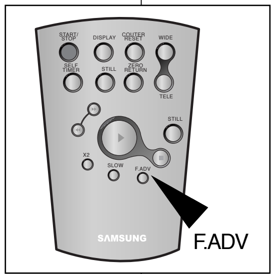
Advanced Recording

Frame advance (To play back frame by frame)

⌘ Press the F.ADV button on the Remote Control while in Still mode.
The F.ADV function works in still mode only.

⌘ To resume normal playback, press the ▶/II (PLAY/STILL) button.

⌘ If you want to play the tape in reverse by one frame, pause the video tape by pushing the STILL button and change the direction into the reverse with STILL button again. Then push the F.ADV button on the remote control.



X2 Playback (Forward/Reverse)

⌘ Forward X2 Playback
- ■ Press the X2 button on the Remote Control during Playback.
- ■ To resume normal playback, press the ▶/II (PLAY/STILL) button.

⌘ Reverse X2 Playback
- ■ Press the ◀◀ (REW) button during Forward X2 Playback
- ■ To resume normal playback, press the ▶/II (PLAY/STILL) button.

Reference

■ Mosaic shaped distortion may appear on the screen while in some of the various playback modes.
- Mosaic shaped distortion or noise may be experienced when you play back tapes recorded in LP which contain various playback functions.

■ There is no sound when using some playback functions.

高级录像技术

帧步进 (逐帧重放)

⌘ 在静止模式时，按遥控器上的帧步进（F.ADV）钮。
帧步进（F.ADV）功能仅在静止模式时工作。

⌘ 如需恢复正常重放，按 ▶/II （播放/静止）钮。

⌘ 如果您想反向播放一帧，推动静止按钮暂停录像带并通过再次按下静止按钮，改变方向到反向。然后，推动遥控器上帧步进按钮。

X2 重放 (向前/向后)

⌘ 向前X2重放
- ■ 在重放期间，按下遥控器上X2按钮。
- ■ 如需恢复正常重放，按▶/II （播放/静止）钮。

⌘ 反向X2重放
- ■ 在向前X2重放期间，按下 ◀◀ （快倒）按钮。
- ■ 如需恢复正常重放，按▶/II （播放/静止）钮。

参考

■ 在以下各种重放模式下，屏幕上可能出现马赛克状的失真。
- 在您重放录制在含有各种重放功能的、长时播放录制的录像带时，可能会遇到马赛克状的失真。

■ 在使用一些重放功能时，会没有声音。

ENGLISH

Advanced Recording

ZERO MEMORY

⌘ The MEMORY function works in both CAM and VCR modes.
⌘ You can mark a point on a tape that you want to return to following playback.

1. Press the ZERO MEMORY button on the remote control during playback or recording at the point you wish to return to.
   - ■ The time code is changed to a tape counter that is set to zero memory with the M 0:00:00(Zero memory indicator)
   - ■ If you want to cancel the zero memory function, press the ZERO MEMORY button again.

2. Finding the zero position.
   - ■ When you have finished playback, fast forward or rewind the tape.
     - The tape stops automatically when it reaches the zero position.
   - ■ When you have finished recording, press the power switch on the VCR and press the ◀◀ (REW) button.
     - The tape stops automatically when it reaches the zero position.

3. The tape counter with the M (Zero memory indicator) disappears from the display and the tape counter is changed to the time code.

Reference

■ In the following situations, ZERO MEMORY mode may be canceled automatically
- At the end of the section marked with the ZERO MEMORY function.
- When the tape is ejected.
- When you remove the battery pack or power supply.

■ The zero memory may not function correctly where there is a break between recordings on the tape.
■ The ZERO MEMORY will not operate in DV IN mode.

中文

高级录像技术

零点记忆

⌘ 记忆功能在摄象机和录像机模式时工作。
⌘ 您可以在录像带标记一个想返回时接下来重放的点。

1. 在重放或录像期间，在想返回的点处按遥控器上零点记忆按钮。
   - ■ 时间代码改变到录像带计数器上，录像带计数器置于零点记忆—M 0:00:00(零点记忆指示器)
   - ■ 如果您想取消零点记忆功能，再次按下零点记忆按钮。

2. 找到零点。
   - ■ 在录像带播放完毕时，快进或快倒。
     - 在录像带到达零点时，录像带自动停止。
   - ■ 在完成录像时，按下录像机上的电源开关并按下◀◀（快倒）按钮。
     - 在录像带到达零点时，录像带自动停止。

3. 带有 M（零点记忆指示器）的录像带计数器从显示器上消失且录像带计数器变成时间代码。

参考

■ 在以下情况下，零点记忆模式可能自动取消。
- 在标有零点记忆功能的段落的结尾。
- 在取出电池组或去除电源时。

■ 在录像带上录像有中断的地方，零点记忆可能不能正常工作。
■ 零点记忆在数字视频输入（DV IN）模式不工作 。

ENGLISH

IEEE 1394 Data Transfer

Transferring IEEE1394 (i.LINK)-DV standard data connections

Connecting to a DV device

⌘ Connecting with other DV standard products.
- ■ A standard DV connection is quite simple. If a product has a DV port, you can transfer data by connecting to the DV port using the correct cable.
- !!! Please be careful since there are two types of DV ports, (4pin, 6pin). This camcorder has a 4pin terminal.

⌘ With a digital connection, video and audio signals are transmitted in digital format, allowing high quality images to be transferred.

Connecting to a PC

⌘ If you want to transmit data to a PC, you must install a IEEE 1394 add-on card onto the PC. (not supplied)

⌘ The frame rate recorded for video capturing is dependent on the capacity of the PC.

Reference

■ When you transmit data from the camcorder to another DV device, some functions may not work.
In this case, please reconnect the DV cable or turn the power OFF and ON again.

■ VP-D130i/D190i can receive digital data from another DV device.

■ You can record a picture transferred over a DV connection on VP-D130i/D190i

中文

IEEE 1394 数据传输

传送 IEEE 1394(i.LINK) – DV标准数据连接

与DV设备连接

⌘ 与其它数字视频（DV）标准产品连接。
- ■ DV标准连接非常简单。如果产品有一个数字视频（DV）端口，则可用一条合适的电缆与其它设备的数字视频（DV）端口连接，这样就可进行数据传输。
- !!! 务必注意有两种数字视频（DV）端口（4针型、6针型）。本摄录一体机有一个4针端子。

⌘ 利用数字连接装置，视频与音频信号以数字形式传输，可实现高质量的图象传输。

与PC机连接

⌘ 如果您需向PC机传输数据，您必须在PC机上安装IEEE 1394插卡（未提供）。

⌘ 视频捕捉的录制帧速率取决于PC机的性能。

参考

■ 在您从摄录一体机向另一台数字视频设备传送数据时，一些功能可能不工作。
此时，请重新连接数字视频电缆或关闭电源，再重新打开。

■ VP-D130i/D190i 可接收另一台数字视频设备的数字数据。

■ 您可以录制通过VP-D130i/D190i 上的数字视频连接传送的图像。

ENGLISH

IEEE 1394 Data Transfer

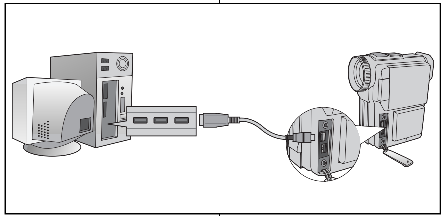
● System requirements

- CPU : faster Intel® Pentium III™ 450Mhz compatible.
- Operating system : Windows® 98SE, ME, XP, Mac OS
- Main memory : more than 64 MB RAM
- IEEE1394 add-on card or built in IEEE1394 card

Recording with a DV connection cable (VP-D130i/D190i only)

1. Set the power switch to VCR mode.

2. Connect the DV cable (not supplied) from the DV IN/OUT port of the camcorder to the DV IN/OUT port of the other DV device.
   - Make sure that DV IN appears on the screen.



3. Press the START/STOP button to begin REC PAUSE mode.
   - PAUSE is displayed on the OSD.

4. Start playback on the other DV device while you monitor the picture.

5. Press the START/STOP button to start recording.
   - If you want to pause recording momentarily, press the START/STOP button again.

6. To stop recording, press the ■ (STOP) button.

Reference

When using this camcorder as a recorder, the pictures that appear on a monitor may seem uneven, however recorded pictures are not affected.

中文

IEEE 1394 数据传输

● 系统要求

- CPU：Intel® Pentium III™ 450Mhz 以上兼容
- 操作系统：Windows® 98SE, ME, XP, Mac OS
- 主存储器：大于64 MB RAM
- IEEE1394插卡或内置IEEE 1394卡。

用DV电缆连接进行录制(仅限于VP-D130i/D190i)

1. 将电源开关置于录像机模式。
2. 将DV电缆（未提供）从摄录一体机的DV 输入/输出端口连接到另一台DV设备的DV输入/输出端口连接。
   - 保证DV IN出现在屏幕上。

3. 按下启动/停止按钮开始录像暂停模式。
   - 暂停（PAUSE）显示在在屏显示上。

4. 在您监视图像的同时，启动另一台DV设备上的重放。

5. 按下启动/停止按钮开始录制。
   - 如果您想立即暂停录制，再次按下启动/停止按钮。

6. 如需停止录制，按■停止（STOP）钮。

参考

当将本摄录一体机用作录像机时，监视器上的图像可能不稳定，但是录制的图像不受影响。

ENGLISH

USB interface

● Transferring a Digital Image through a USB Connection

- ⌘ You can easily transfer a still image from a camera, tape, memory to a PC without additional add-on cards via a USB connection.
- ⌘ You can transfer an image to a PC via a USB connection.
- ⌘ If you transfer data to a PC, you need to install the software (Driver, Editing software) supplied with the camcorder.

System Requirements

- ■ CPU : Intel® Pentium II™ processor compatible or better
- ■ Operating system : Windows® 98/98SE/ME/2000/XP
- ■ RAM : 64 MB or more
- ■ CD-ROM: 4x CD-ROM drive
- ■ VIDEO : 65,000-colour or better video display card
- ■ Available USB port
- ■ Hard Disc : 4GB (8GB recommended)

Reference

- ■ Intel® Pentium II™ is a trademark of the Intel Corporation.
- ■ Windows® is a registered trademark of the Microsoft® Corporation.
- ■ All other brands and names are property of their respective owners.

中文

USB接口

● 通过USB连接传送数字图像

- ⌘ 通过USB连接，可非常方便地从摄像机、录像带、内存向PC传送静像，而不需要附加的插卡。
- ⌘ 您可通过USB连接传送图像到PC上。
- ⌘ 如果要将数据传输到PC上，需要安装随摄录一体机提供的软件(驱动程序、编辑软件)。

系统要求

- ■ CPU :Intel® Pentium II™ 处理器兼容或更好的CPU
- ■ 操作系统：Windows® 98/98SE/ME/2000/XP
- ■ RAM :64 MB 或更大
- ■ CD-ROM:4x CD-ROM 驱动器
- ■ 视频： 65,000色或更好的视频显卡
- ■ 可使用USB端口
- ■ 硬件: 4GB(建议使用8GB)

参考

- ■ Intel® Pentium II™ 为Intel公司的商标。
- ■ Windows® 为Microsoft® 公司的注册商标。
- ■ 其它品牌和名称为各自所有者所有。

ENGLISH

USB interface

Installing DVC Media 2.0 Program

- Do not connect the camcorder to PC before installing the program.
- If another camera or scanner is connected, please disconnect it in advance.
- This explanation is based on Windows® 98SE OS.

How to install the program

1. The install program automatically operate when the CD is inserted into CD-ROM.



Reference

If the install program does not operate, please double click Install.exe in CD-ROM Drive.

2. Click  to install the program.
3. Follow the instruction to install.

中文

USB接口

安装DVC Media 2.0 程序

- 安装程序之前，不要将摄象机连接到PC。
- 如果已与另外摄象机或扫描仪相连接，建议断开。
- 此说明基于Windows 98SE OS.

如何安装程序

1. 当光盘放人光盘驱动器时，安装程序会自动运行。

参考

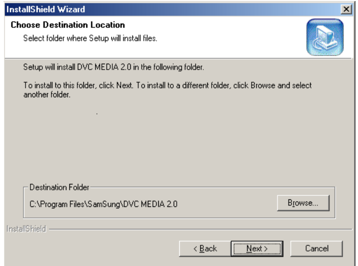
如果安装程序没有自动运行， 请在光盘驱动双击Install.exe。

2. 点击  开始安装。
3. 按照说明进行安装。

USB interface

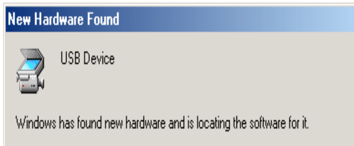
4. The below window displays the folder to install the program.
   - ■ Basically the program is installed in the following folder. C:\Programfiles\Samsung\ DVC Media 2.0
   - ■ Click Browse... to change the folder.

4.



5. Connect the camcorder to PC.
6. PC finds a new hardware and install a driver automatically.
7. If the driver is installed, the install is completed.
8. Execute DVC Media 2.0 player on the Windows wall paper.

6.



Reference

- ■ DVC Media 2.0 User's Manual is included on the accompanying CD in Adobe's Portable Document Format (PDF).
  The user's manual can be viewed using Acrobat Reader software, which is also included on the CD.
  (The Acrobat Reader is a freeware product of Adobe Systems, Inc.)

USB接口

4. 如下窗口显示可安装程序的路径。
   - ■ 基本程序安装在如下位置。 C:\Programfiles\Samsung \DVC Media 2.0
   - ■ 点击 Browse... 更改安装位置。

5. 连接摄象机与PC。
6. PC查找新硬件并自动安装驱动程序。
7. 驱动程序安装完毕，即表示安装过程完成。
8. 运行Windows桌面上的 DVC Media 2.0 播放器。

参考

- ■ DVC Media 2.0的使用手册储存在作为附件提供的软件CD里。
  该使用手册的文件可以在Acrobat Reader程序下浏览,
  Acrobata Reader也同样储存在软件CD里。
  (Acrobata Reader程序为赠送品)

ENGLISH

USB interface

Connecting to a PC

1. Connect a USB cable to the USB port on the PC.
2. Connect the other end of the USB cable into the proper terminal on the camcorder. (USB jack)

Reference

- If you disconnect the USB cable from the PC or the camcorder while transferring, the data transmission will stop and the data may be damaged.
- If you connect the USB cable to a PC via a USB HUB or simultaneously connect the USB cable along with other USB devices, the camcorder may not work properly.
  - In this case, remove the other USB devices from the PC and reconnect the camcorder.

中文

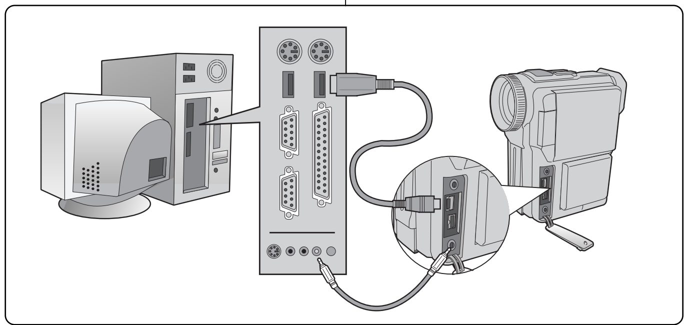
USB接口

连接到PC上

1. 连接USB电缆到PC的USB端口上。
2. 连接USB电缆的另一端到摄录一体机的适当的端子上(USB插口)。

参考

- 如果传送期间，将USB电缆与PC或摄录一体机断开，数据传输会停止且数据可能受到破坏。
- 如果将USB电缆通过USB插口连接到PC上或同时与其它USB设备一道连接USB电缆，则摄录一体机可能工作不正常。
  - 在这种情况下，将USB设备从PC上断开并重新连接摄录一体机。



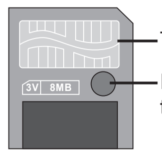
ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

SmartMediaCard

- The SmartMediaCard (SMC), store and manage still images recorded by the camera.

Functions with SMC



- Recording still images
- Viewing still images
  - Single
  - Slide show
- Protecting images against accidental erasure
- Deleting images recorded on a card
- Print marking still images
- Formatting a card

Reference

- You can use most of the camera’s functions when recording to a SMC.
- “▶▶▶ ▣” appears on the screen while recording to card.
- While recording or loading an image, do not eject or insert a SmartMediaCard.
  - Inserting or ejecting a SmartMediaCard while recording or loading an image can cause data damage.
- If you want to save all images on the SmartMediaCard, affix the protection label to the protection tab on the SmartMediaCard.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

SmartMedia卡

- SmartMedia 卡(SMC)存储和管理摄像机录制的静止图像。

SMC的功能

- 录制静止图像。
- 观看静止图像
  - 单幅图像
  - 放映幻灯片
- 防止图像被意外擦除
- 删除录制在卡上的图像
- 打印标记的静止图像
- 格式化卡

参考

- 在录制到SMC上时， 可使用大多数录像机的功能。
- 在录制到卡上时"▶▶▶ ▣"出现在屏幕上。
- 在录制或加载图像时， 不要取出或装入SmartMedia卡。
  - 在录制或加载图像时取出或装入SmartMedia卡会造成数据破坏。
- 如果您想保存图像到SmartMedia卡上，将保护标签加到SmartMedia卡上。

Digital Still Camera mode (VP-D190/D190i only)

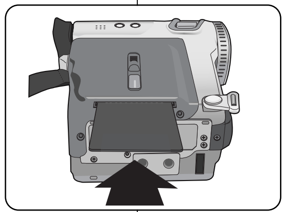
Inserting and ejecting the SmartMediaCard

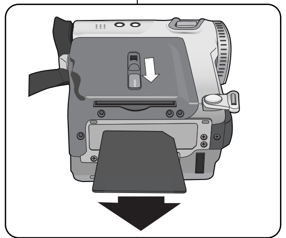
● Inserting the card

1. Turn the Power switch to OFF.
2. Insert the SmartMediaCard into the CARD slot located beneath the camcorder, in the direction of the arrow.

● Ejecting the card

1. Turn the Power switch to OFF.
2. Slide down the Card Eject switch and pull out the card.





Reference

- ■ If you turn the power switch to M.PLAY, the last recorded image appears.
  - If there are no recorded images on the SmartMediaCard, NO STORED IMAGE! and [icon] will display on the screen.
- ■ Do not turn the power off while recording, loading, erasing or formatting.
- ■ Please turn the power off before you insert or eject the SmartMediaCard.
  You could lose data on the SmartMediaCard.

- ■ Do not allow metal substances to come in contact with the terminals of the Card.
- ■ Do not bend the Card.
- ■ After pulling the card out from the camcorder, please keep the SmartMediaCard in a soft case to prevent static shock.
- ■ The stored contents may be changed or lost as a result of misuse, static electricity, electric noise or repair.
  Save important images separately.
- ■ Samsung is not responsible for data loss due to misuse.
- ■ If the USB cable is connected to the camcorder, the ■ (DELETE), ▶/II (S.SHOW), ▶▶ (FWD), ◀◀ (REW) buttons are not available in M.PLAY mode.

数字静止摄像机模式 (只限于VP-D190/D190i)

插入和取出SmartMedia卡

● 插入卡

1. 将电源开关置于关闭。
2. 按箭头方向，将SmartMedia卡插入到摄录一体机下面的卡槽中。

● 取出卡

1. 将电源开关置于关闭。
2. 滑下“取卡”开关并取出卡。

参考

- ■ 如果您将电源开关置于手动播放，会出现最后录制的图像。
  - 如果在SmartMedia卡上没有录制图像，“NO STORED IMAGE! ”（无存储的图像）[icon] 和会显示在屏幕上。
- ■ 在录制、加载、擦除或格式化时，不要关闭电源。
- ■ 在装入或取出SmartMedia卡之前，请将电源关闭。
  否则您可能会丢失SmartMedia卡上的数据。

- ■ 不要让金属物质与卡的端子接触。
- ■ 不要将卡弯曲。
- ■ 在从摄录一体机拔出卡后，请将SmartMedia卡保存在软包中以防止静电触击。
- ■ 由于错误使用、静电、电噪声或修理，存储的内容可能被改变或丢失。
  单独保存重要的图像。
- ■ 三星对于错误使用而造成的数据丢失不负责。
- ■ 如果将USB电缆连接到摄录一体机上，■（删除）▶/II（慢放）、▶▶（快进）、◀◀（快倒）按钮在手动播放模式不能使用。

Digital Still Camera mode (VP-D190/D190i only)

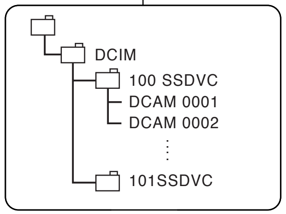
Structure of folders and files on the Smart Media Card

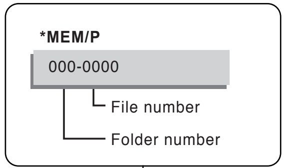
- The still images that you recorded are saved in JPEG file format on the card.

- Each file has a file number and all files are assigned to a folder.
  - A file number from DCAM0001 to DCAM9999 is sequentially assigned to each recorded image.
  - Each folder is numbered from 100SSDVC to 999SSDVC and recorded on the CARD.

Image Format

- Images are compressed in JPEG (Joint Photographic Experts Group) format.
- The number of pixels are 640x480 (VGA) in each mode.





数字静止摄像机模式 (只限于VP-D190/D190i)

Smart Media 卡上文件夹和文件的结构

- 录制的静止图像会以JPEG文件格式保存在卡上。

- 每个文件都有一个文件号且全部文件都被分配到一个文件夹。
  - 每个录制的图像被按顺序分配的了从DCAM0001到DCAM9999的文件号。
  - 每个文件夹的编号从100SSDVC到999SSDVC且被记录在卡上。

图像格式

- 图像以JPEG格式压缩。
- 每个模式的像素数为640x480 (VGA)。

ENGLISH

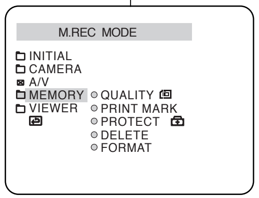
Digital Still Camera mode (VP-D190/D190i only)

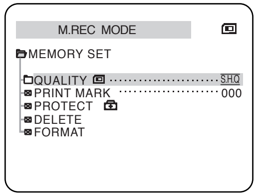
Selecting the image quality

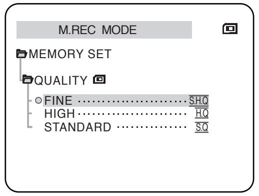
⌘ You can select the quality of a still image to be recorded.

Select the image quality

1. Set the power switch on the M.REC or VCR mode.
2. Press the MENU button.
   - ■ The menu list will appear.
3. Turn the MENU DIAL to highlight MEMORY.
4. Push the MENU DIAL to enter the sub-menu.
5. Turn the MENU DIAL to highlight QUALITY in the submenu.
6. Push the MENU DIAL.
7. Using the MENU DIAL, select the image quality.
   - ■ Push the MENU DIAL to confirm the image quality.
   - ■ If you exit the sub-menu without Pushing the MENU DIAL, the quality mode is not changed.
8. To exit, press the MENU button.







● Number of images on the SmartMediaCard.

QUALITY	8MB Built-in memory
FINE	Approx.60
HIGH	Approx.120
STANDARD	Approx.240

- The actual number that you can record varies depending on the image size.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

选择图像质量

⌘ 您可以选择录制的静止图像的质量。

选择图像质量

1. 将电源开关置于手动录像或录像机模式。
2. 按菜单按钮。
   - ■ 会出现菜单列表。
3. 转动菜单调节盘使记忆突出显示。
4. 推动菜单调节盘以进入子菜单。
5. 转动菜单调节盘，使子菜单中的质量突出显示。
6. 推动菜单调节盘。
7. 使用菜单调节盘，选择图像质量。
   - ■ 推动菜单调节盘确认图像质量。
   - ■ 如果退出子菜单而没有推动菜单调节盘，质量模式不会改变。
8. 若要退出，按菜单按钮。

● SmartMedia卡上图像的数量

质量	8MB内存
精细	约 60
高	约 120
标准	约 240

- 可录制的实际的数量取决于图像大小。

ENGLISH

中文

Digital Still Camera mode (VP-D190/D190i only)

数字静止摄像机模式 (只限于VP-D190/D190i)

Recording Still images to a SmartMediaCard in M.REC Mode.

在手动录像模式将静止图像录制到Smart Media卡上.

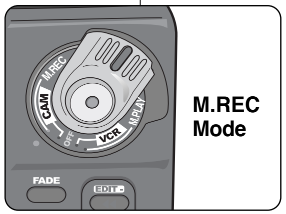
- You cannot record moving Pictures onto a SmartMediaCard.
- Audio cannot be recorded onto the SmartMediaCard.

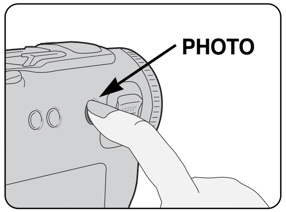
Recording images to a SmartMediaCard.

1. Set the mode switch to M.REC.

2. Press the PHOTO button lightly(about halfway down) and hold it.
   - If you do not wish to record, release the pressure from the button.

3. Press the PHOTO button fully down.
   - The still image is recorded to the SmartmediaCard.
   - While the camcorder is recording the still image, “ ▶▶▶ ” appear on the screen.







- 不能将移动的图像录制到SmartMedia卡上。
- 音频不能录制到SmartMedia卡上。

录制图像到SmartMedia卡上

1. 将模式开关置于手动录像。

2. 轻轻按下照片按钮（约按一半）并保持。
   - 如果不想录制，松开按钮。

3. 完全按下照片按钮。
   - 静止图像会被录制到Smartmedia 卡上。
   - 在摄录一体机录制静止图像时，“ ▶▶▶ ”出现在屏幕上。

ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

Recording an image from a cassette as a still image.

- You can record still image from a cassette onto a SmartMediaCard.
- If you want to recorded multiple still images from a cassette to a SmartMediaCard, use the COPY function.

1. Set the power switch to VCR mode.

2. Playback the cassette.

3. Press the PHOTO button lightly(about halfway down) and press it, when the image you want to record appears.
   - The tape is set to play back pause(STILL) mode.
   - If you want to change the captures image without recording, release the PHOTO button and select image again.

4. Press the PHOTO button fully down.
   - The still image is recorded to the SmartmediaCard.
   - While the camcorder is recording the still image, “ ▸▸▸ ” appear on the screen.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

从录像带录制作为静止图像的图像

- 您可从录像带录制静止图像到SmartMedia卡上。
- 如果您想从录像带录制多个静止图像到SmartMedia卡上，使用复制按钮。

1. 将电源开关置于录像机模式。

2. 重放录像带。

3. 在出现您想录制的图像时，轻轻按下照片按钮（约按一半）并保持住。
   - 录像带被置于重放暂停（静止）模式。
   - 如果您想改变捕捉图像，而不录制，松开照片按钮并再次选择图像。

4. 完全按下照片按钮。
   - 静止图像被录制到Smartmedia卡上。
   - 在摄录一体机录制静止图像时，“ ▸▸▸ ” 出现在屏幕上。

ENGLISH

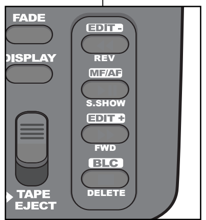
Digital Still Camera mode (VP-D190/D190i only)

Viewing Still images

- ⌘ You can playback and view still images recorded on the SmartMediaCard.
- ⌘ There are 2 ways to view recorded images.
  - ■ Single : To view an image frame by frame.
  - ■ Slide show : To view all images automatically and in consecutive order.

To view a Single image

1. Set the power switch on the M.PLAY mode.
   - ■ The last recorded image appears.
     - If there are no recorded images on the Smart Media Card, NO STORED IMAGE! and [icon] will display on the screen.
2. Using the ▶▶(FWD) and ◀◀(REW) buttons, search for the desired still image.
   - ■ To view the next image : press the ▶▶(FWD) button.
   - ■ To view the previous image : press the ◀◀(REW) button.
   - ■ Pressing ▶▶(FWD) when you are on the last image will take you to the first image and pressing ◀◀(REW) when you are on the first image will take you to the last image.
   - ■ Keep pressing ▶▶(FWD) or ◀◀(REW) to search for an image quickly.



To view a slide show

1. Set the power switch to M.PLAY mode.
   - ■ The last recorded image appears
2. Press the ▶/II (S.SHOW) button.
   - ■ All images will be played back consecutively one after the other for 4~5 seconds each.
3. To stop the slide show, press the ▶/II (S.SHOW) button again.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

观看静止图像

- ⌘ 您可重放并观看录制在SmartMedia卡上的静止图像。
- ⌘ 观看录制的图像有2种方式。
  - ■ 单幅图像：逐帧观看图像。
  - ■ 放映幻灯片：按顺序自动观看全部图像。

若要观看单幅图像

1. 将电源开关置于手动播放模式。
   - ■ 出现最后录制的图像。
     - 如果Smart Media 卡上没有录制的图像，“无存储的图像[icon]”和 会显示在屏幕上。
2. 使用 ▶▶（快进）和 ◀◀（快倒）按钮，搜索所需的静止图像。
   - ■ 若要观看下一图像，按▶▶ (快进）钮。
   - ■ 若要观看上一图像，按◀◀ (快倒）钮。
   - ■ 在观看最后的图像时按 ▶▶ (快进）钮会转到第一个图像，在观看第一个图像时按 ◀◀（快倒）钮，会转到最后的图像。
   - ■ 按住▶▶ (快进）或◀◀（快倒）钮快速查找图像。

若要观看幻灯片

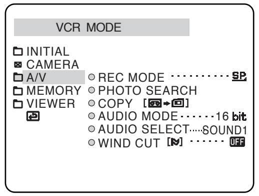
1. 将电源开关置于手动播放模式。
   - ■ 最后录制的图像会出现。
2. 按▶/II（慢放）按钮。
   - ■ 全部图像会一个接一个重放4~5秒。
3. 若要停止放映幻灯片，再次按下▶/II（慢放）按钮。

ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

Copying still images from a cassette to SmartMediaCard

⌘ You can copy still images with PHOTO function on a cassette onto a SmartMediaCard.



1. Set the power switch to the VCR mode.

2. Press the MENU button.

3. Turn the MENU DIAL to highlight A/V and push the MENU DIAL.
   ■ The submenu will appear.

4. Turn the MENU DIAL to highlight PHOTO COPY and push the MENU DIAL.
   ■ All still images that recorded on a cassette will be copied to a SmartMediaCard.

5. The camcorder automatically performs the photo search to find still images and copying starts.

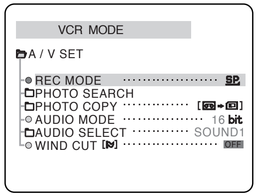
6. Press ■ (STOP) button to stop copying.
   ■ Copying stops when the cassette is finished or SmartMediaCard is full.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

从录像带上复制静止图像到SmartMedia卡上

⌘ 您可通过照片功能将静止图像复制到SmartMedia上。



1. 将电源开关置于录像机模式。

2. 按菜单按钮。

3. 转动菜单调节盘使A/V突出显示并推动菜单调节盘。
   ■ 会出现子菜单。

4. 转动菜单调节盘以突出显示照片复制并推动菜单调节盘。
   ■ 录制在录像带上的全部静止图像会被复制到SmartMedia卡。

5. 摄录一体机会自动查找照片，以找到静止图像并开始复制。

6. 按下■（停止）按钮以停止复制。
   ■ 在录像带到了尽头或SmartMedia卡已满，则复制停止。

ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

Marking on images for printing

- This camcorder supports the DPOF (Digital Print Order Format) print format.
- You can automatically print images recorded on a SmartMediaCard with a printer supporting DPOF.
- There are 2 ways to make a PRINT MARK.
  - THIS FILE : You can set a print mark on the photo image displayed on the LCD.
  - ALL FILES : To print 1 copy each of all of the stored images.

1. Set the mode switch to M.PLAY mode.
   - The last recorded image appears.
2. Using the ▶▶(FWD) and ◀◀(REW) buttons, search for the still image that you want to mark.
3. Press the MENU button.
4. Turn the MENU DIAL to highlight MEMORY and Push the MENU DIAL.
   - The MEMORY SET submenu will appear.
5. Turn the MENU DIAL to highlight PRINT MARK, Push the MENU DIAL.
6. Use the MENU DIAL to select either THIS FILE or ALL FILES and Push the MENU DIAL.
7. Use the MENU DIAL to select the quantity and Push the MENU DIAL.

Reference

- When you setup the PRINT MARK option to ALL FILES, 200 files from the current file are printed.
- The ALL FILES option may require extended operation time depending on the number of stored images.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

在图像上做打印标记

- 本摄录一体机支持DPOF (数字打印顺序格式)打印格式。
- 您可通过支持DPOF的打印机自动打印录制在SmartMedia 卡上的图像。
- 有两种制作打印标记的方式。
  - 单一文件：您可在显示液晶显示屏上的照片图像设置打印标记。
  - 全部文件：对于存储的图像，每个图像打印一份。

1. 将模式开关置于手动播放模式。
   - 会出现最后录制的图像。
2. 使用▶▶（快进）和◀◀（快倒）钮，查找需要做标记的静止图像。
3. 按菜单按钮。
4. 转动菜单调节盘以使记忆突出显示并推动菜单调节盘。
   - 会出现记忆设置子菜单。
5. 转动菜单调节盘以使打印标记突出显示，推动菜单调节盘。
6. 使用菜单调节盘以选择本文件或全部文件并推动菜单调节盘。
7. 使用菜单调节盘选择数量并推动菜单调节盘。

参考

- 在您设置了打印标记选项到全部文件时，将从当前文件中打印200个文件。
- 根据存储的图像的数量，全部文件选项可能需要较长的操作时间。

Digital Still Camera mode (VP-D190/D190i only)

Protection from accidental erasure

⌘ You can protect important images from accidental erasure.
- If you execute FORMAT, all images including protected images will be erased.

1. Set the power switch to M.PLAY.
   - The last recorded image appears.
   - If there are no recorded images on the Smart Media Card, NO STORED IMAGE! and [icon] will display on the screen.
2. Using the ►►(FWD) and ◄◄(REW) buttons, search for the still image that you want to protect.
3. Press the MENU button.
4. Turn the MENU DIAL to highlight MEMORY and push the MENU DIAL.
   - The submenu of MEMORY SET will appear.
5. Turn the MENU DIAL to highlight PROTECT and push the MENU DIAL.
6. Using the MENU DIAL, select the method and push the MENU DIAL.
   - THIS FILE : protects the currently selected file from erasure.
7. Using the ►►(FWD) and ◄◄(REW) buttons, search for the still image that you wish to protect.
   - Deactivate the image protection for the image following step 5.
8. To exit the menu, press the MENU button.

数字静止摄像机模式 (只限于VP-D190/D190i)

防止意外擦除

⌘ 您可保护重要的图像不被意外擦除。
- 如果您执行格式化，包括保护图像的全部图像将被擦除。

1. 将电源开关置于手动播放。
   - 出现最后录制的图像。
   - 如果Smart Media 卡上无存储的图像，“无存储的图像 [icon] ”和会显示在屏幕上。
2. 使用 ►►（快进）和◄◄（快倒）钮，查找需要保护的静止图像。
3. 按菜单按钮。
4. 转动菜单调节盘以使记忆突出显示并推动菜单调节盘。
   - 会出现记忆设置子菜单。
5. 转动菜单调节盘以使保护突出显示，推动菜单调节盘。
6. 使用菜单调节盘，选择方法并推动菜单调节盘。
   - 本文件：保护当前选择的文件不被擦除。
7. 使用 ►►（快进）和 ◄◄（快倒）钮，查找需要保护的静止图像。
   - 按步骤5去除图像保护。
8. 若要退出菜单，按菜单按钮。

ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

Deleting Still images

- ⌘ You can erase the still images recorded on the SmartMediaCard.
- ⌘ If you want to delete protected images, you must first deactivate the image protection.
- ⌘ An image which has been deleted cannot be recovered.

1. Set the power switch to M.PLAY.
2. Using the ▶▶(FWD) and ◀◀(REW) buttons, search for the still image that you want to delete.
3. Press the MENU button.
4. Turn the MENU DIAL to highlight MEMORY and push the MENU DIAL.
   - ■ The MEMORY SET submenu will appear.
5. Turn the MENU DIAL to highlight DELETE and push the MENU DIAL.
   - ■ Using the MENU DIAL, select either THIS FILE or ALL FILES and push the MENU DIAL.
   - ■ THIS FILE : deletes only the file currently selected.
   - ■ ALL FILES : deletes all files stored in the SmartMediaCard.
6. A box will appear to verify whether you wish to delete the image(s).
   - ■ EXECUTE : deletes the selected image(s).
   - ■ CANCEL : does not delete the selected image(s) and returns to the previous menu.

Reference

- ■ If you try to delete a protected image, "Protect!" appears on the screen.
- ■ You can delete the current displayed image (when still images are on) by pressing ■ (DELETE) on the function keys. Pressing ■ (DELETE) will see you "DELETE REALLY?", and pressing again will delete the current image.

中文

数字静止录像机模式 (只限于VP-D190/D190i)

删除静止图像

- ⌘ 您可擦除录制在SmartMedia卡上的静止图像。
- ⌘ 如果您想删除保护的图像，首先去掉图像保护。
- ⌘ 删除的图像不能恢复。

1. 将电源开关置于手动播放。
2. 使用▶▶（快进）和◀◀（快倒）钮，查找需要删除的静止图像。
3. 按菜单按钮。
4. 转动菜单调节盘以使记忆突出显示并推动菜单调节盘。
   - ■ 会出现记忆设置子菜单。
5. 转动菜单调节盘以使删除突出显示，推动菜单调节盘。
   - ■ 使用菜单调节盘，选择本文件或全部文件并推动菜单调节盘。
   - ■ 单一文件：只删除当前选择的文件。
   - ■ 全部文件：删除存储在SmartMedia卡上的全部文件。
6. 会出现一个框以验证是否想删除图像。
   - ■ 执行：删除选择的图像。
   - ■ 取消：不删除选择的图像并返回到上一菜单。

参考

- ■ 如果您想删除保护的图像，"Protect!"（保护！）会出现在屏幕上。
- ■ 通过按功能键的■（删除），可删除当前显示的图像（在静止图像打开时）。按■（删除）会见到"DELETE REALLY?""确定删除？"字

ENGLISH

Digital Still Camera mode (VP-D190/D190i only)

Formatting a SmartMediaCard

- You can use the MEMORY FORMAT functions to completely delete all images and options on a SmartMediaCard , including protected images.
- The format function restores the SmartMediaCard to its initial states.
- The SmartMediaCard supplied with this camcorder has been formatted already.

Attention

- If you execute the MEMORY FORMAT function, all images will be erased completely and erased images cannot be recovered.

1. Set the mode switch to the M.PLAY mode.
2. Press the MENU button.
3. Turn the MENU DIAL to highlight MEMORY and Push the MENU DIAL.
   - The sub menu will appear.
4. Select FORMAT from the list and Push the MENU DIAL.
5. "ALL FILES ARE DELETED! FORMAT REALLY?" appears on the screen.
6. Using the MENU DIAL, select the item.
   - NO : To return to previous menu
   - YES : To start formatting.
7. Push the MENU DIAL.
8. To exit the menu, press the MENU button.

中文

数字静止摄像机模式 (只限于VP-D190/D190i)

格式化Smart Media卡

- 您可使用记忆格式化功能来完全删除SmartMedia卡上的全部图像和选项，包括保护的图像。
- 格式化功能将SmartMedia卡恢复到初始状态。
- 随本摄录一体机提供的SmartMedia卡已经格式化。

注意

- 如果您执行记忆格式化功能，所有图像会被完全擦除且擦除的图像不能恢复。

1. 将模式开关置于手动播放模式。
2. 按菜单按钮。
3. 转动菜单调节盘以使记忆突出显示并推动菜单调节盘。
   - 会出现子菜单。
4. 从列表选择格式化并推动菜单调节盘。
5. "ALL FILES ARE DELETED! FORMAT REALLY?" （全部文件被删除！确定格式化吗？）会出现在屏幕上。
6. 使用菜单调节盘，选择项目。
   - 否：返回上一菜单。
   - 是：开始格式化。
7. 推动菜单调节盘。
8. 若要退出菜单，按菜单按钮。

Maintenance

After finishing a recording

⌘ At the end of a recording you must remove the power source.
⌘ When recording with a Lithium Ion Battery Pack, leaving the pack on the camcorder can reduce the life span of the battery. Hence, it should be removed from the camcorder.

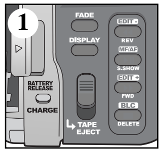
After completing a recording session

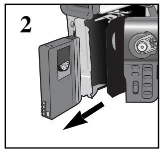
1. Slide the TAPE EJECT switch in the direction of the arrow.
   - Opening the cassette door ejects the tape automatically.
   - Please wait while the tape is completely ejected.

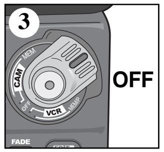
2. After removing the tape, close the door and store the camcorder in a dust free environment.
   - Dust and other foreign materials can cause square-shaped noise or jerky images.

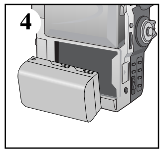
3. Set the power switch to the OFF mode.

4. Disconnect the power source or remove the Lithium Ion Battery Pack.
   - When disconnecting a power supply, separate it in the reverse order as connecting it, by referring to page 21.
   - Hold down the BATTERY RELEASE button and slide the battery pack in the direction of the arrow.









维护

完成录像后

⌘ 结束录制后，必须断开电源。
⌘ 在使用锂离子电池组拍摄时，将电池组留在摄录一体机上会缩短电池的使用寿命。因此必须将电池组从摄录一体机中取出。

完成连续录像后

1. 将出盒（EJECT）开关向箭头所示方向滑动。
   - 打开带仓门，自动退出盒带。
   - 等待到盒带全部安全退出为止。

2. 取出盒带后，首先关闭带仓门，将摄录一体机保存在无尘环境中。
   - 灰尘和其它异物会造成马赛克或抖动的图像。

3. 将电源开关置于关闭模式。

4. 断开电源，或取出锂离子电池组。
   - 在断开与电源连接时，按第21页所述顺序相反的步骤断开电源。
   - 按住电池释放按钮并按箭头方向所示滑动电池组。

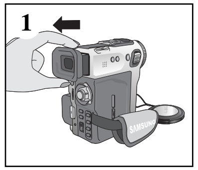
ENGLISH

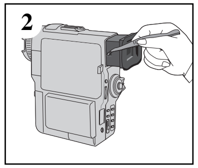
Maintenance

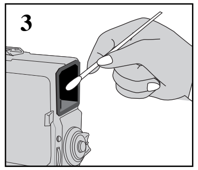
Cleaning and Maintaining the Camcorder

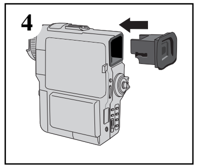
Cleaning the VIEWFINDER

1. Pull the VIEWFINDER out.
2. As shown in the illustration, press the fix button located on the left side of the camcorder section adjacent to the VIEWFINDER with a sharp object and pull the VIEWFINDER out.
3. Clean the VIEWFINDER lens and the lens on the camcorder with a soft cotton swab.
4. Once the cleaning is completed, place the VIEWFINDER back on to the camcorder.





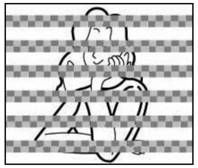




Cleaning the Video Heads

To ensure normal recording and clear pictures, clean the video heads when the playback pictures display square block-shaped noise or distortion or if only a blue screen appears during playback, as the video heads may be dirty.





1. Set the power switch to VCR mode.
2. Insert the cleaning tape.
3. Press the ▶/II (PLAY/STILL) button.
4. Press the ■ (STOP) button after 10 seconds.

Reference

- Check the quality of the picture using a videocassette. If the picture quality has not improved, repeat the operation. If the problem continues, contact your local authorized service center.
- Clean the video heads with the dry type cassette cleaner.

中文

维护

清洁与维护摄录一体机

清洁取景器

1. 拔除取景器。
2. 如图所示，用尖的物体按下摄录一体机左侧靠近取景器的固定按钮并拔出取景器。
3. 用软的棉签清洁取景器镜头和摄录一体机的镜头。
4. 清洁完毕，将取景器放回摄录一体机上。

清洁视频磁头

为保证正常录像和图像清晰，如在重放过程中发现图象出现方块形杂波或失真或重放时只有蓝色屏幕时，视频磁头可能已很脏，应清洁视频磁头。

1. 将电源开关设定到放像机（VCR）模式。
2. 放入清洁带。
3. 按 ▶/II （拨放/静止）钮。
4. 10秒钟后按 ■ (停止)（STOP）钮。

参考

- 用录像带检查清洁后的图象质量。如果图象质量仍然不好，重复清洁视频磁头的操作。如果还存在问题，与当地的授权服务中心联系。
- 用干式清洁带清洁视频磁头。

Maintenance

Using Your Camcorder Abroad

- Each country or region has its own electric and colour systems.
- Before using your camcorder abroad, check the following items.

Power sources

- You can use your camcorder in any country or area with the supplied AC Power Adapter within 100V to 240V, 50/60 Hz.
- Use a commercially available AC plug Adapter, if necessary, depending on the design of the local wall outlet.

Colour system

- You can view your recording in the viewfinder.
  However, to view it on a television or copy it to a videocassette recorder, the television or VCR must be PAL-compatible and have the appropriate audio/video jacks.
  Otherwise, you may need to use a transcoder.

- PAL-compatible Countries/Regions

  Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Holland, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Rumania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.
- NTSC-compatible Countries/Regions

  Bahamas, Canada, Central America, Japan, Mexico, Philippines, Korea, Taiwan, United States of America, etc.

Reference

You can make recordings with your camcorder and view pictures on the LCD from anywhere in the world.

维护

在世界各地使用摄录一体机

- 每个国家或地区都有其自己的电子和电视彩色制式。
- 在世界各地使用摄录一体机之前，应检查以下项目。

电源

- 只要您到的国家或地区的电源在100V 到240V 50/60Hz电源范围内，您就可以通过随机器提供的交流电源适配器使用摄录一体机。
- 如有必要，根据当地墙上插座的设计，使用市场上销售的交流插头转接器。
  彩色制式

彩色设置

- 您可以从取景器观看录制的图像。
  不过，要想在电视机上观看录制的图像或将其复制到盒带式录像机上，电视机或盒带式录像机必须与PAL制兼容，并配备有适用的音频/视频插孔。
  否则需要配备一台转换器。

- 与PAL制兼容的国家/地区
  澳大利亚、奥地利、比利时、保加利亚、中国，独联体各国，捷克共和国、丹麦、埃及、芬兰、法国、德国、希腊、英国、荷兰、香港、匈牙利、印度、伊朗、伊拉克、科威特、利比亚、马来西亚、毛里求斯、挪威、罗马尼亚、沙特阿拉伯、新加坡、斯洛伐克共和国、西班牙、瑞典、瑞士、叙利亚、泰国、突尼斯等。
- 与NTSC制兼容的国家/地区
  巴哈马、加拿大、中美洲、日本、墨西哥、菲律宾、韩国、台湾、美国等

参考

您可以用摄录一体机在世界上任何地点摄像，并可通过液晶显示屏观看重放的图象。

ENGLISH

Troubleshooting

Troubleshooting

⌘ Before contacting a service centre, perform the following simple checks.
They may save you the time and expense of an unnecessary call.

Self Diagnosis Display

Display	Blinking	Informs that...	Action
	slow	the battery pack is almost discharged.	Change to a charged one.
TAPE END!	slow	When the remaining time of the tape is . about 2 minutes	Prepare a new one.
TAPE END!	no	the tape reached its end.	Change to a new one.
TAPE!	slow	there is no tape in camcorder.	Insert a tape.
PROTECTION!	slow	the tape is protected to record.	If you want to record, release the protection.
▲····DLCR	slow	the camcorder has some mechanical fault.	1. Eject the tape. 2. Set to OFF. 3. Detach the battery. 4. Reattach the battery. * If unresolved contact your local service representative.
	slow	moisture condensation has formed in the camcorder.	see below.

Moisture Condensation

⌘ If the camcorder is brought directly from a cold place to a warm place, moisture may condense inside the camcorder, on the surface of the tape, or on the lens. In this condition, the tape may stick to the head drum and be damaged or the unit may not operate correctly.
To prevent possible damage under these circumstances, the camcorder is fitted with a moisture sensor.

⌘ If there is moisture inside the camcorder, (DEW) is displayed. If this happens, none of the functions except cassette ejection will work.
Open the cassette compartment and remove the battery.
Leave the camcorder for at least two hours in a dry warm room.

中文

故障排除

故障排除

⌘ 在与服务中心联系之前，应完成下列简单的检查。
这样就会为您节省时间和不必要电话的费用。

自诊断显示

显示	闪烁	意义	排除故障措施
	慢	电池组几乎放完电。	换装已充足电的电池组。
TAPE END!	慢	磁带剩余时间约为2分钟时。	准备一盒新磁带。
TAPE END!	无	磁带到达其尽头。	换装一盒新磁带。
TAPE!	慢	摄录一体机中无磁带。	插入磁带。
PROTECTION!	慢	磁带受到保护无法录像。	若需拍摄，去除保护。
▲····DLCR	慢	摄录一体机发生机械故障。	1. 退出盒带 2. 设定到OFF（关闭）位置 3. 取出电池 4. 重新装入电池 * 如果重复出现，则应与当地维修机构代表联系。
	慢	摄录一体机内结露。	见下文

湿气凝结

⌘ 如果将摄录一体机从寒冷场所直接带入温暖场所，湿气有可能在摄录一体机内部、磁带表面或镜头上形成冷凝水。在这种情况下，磁带有可能粘附在磁头磁鼓上而受损，或者使摄录一体机不能正常操作。
为防止在这些情况下导致可能的损坏，摄录一体机装备有湿气传感器。

⌘ 如果摄录一体机内部有湿气，则显示 “DEW”（结露）。
如果发生这种情况，除了盒带退出外其他功能无一可用。
打开带仓，取出电池。
将摄录一体机放在干燥温暖的室内至少2小时。

Troubleshooting

Self Diagnosis Display in M.REC/M.PLAY mode

Display	Blinking	Informs that...	Action
NO MEMORY!	slow	There no card or memory in the camcorder.	Insert a card.
MEMORY IS FULL	slow	There is not enough memory to record.	Change to a new card or erase recorded image.
NO STORED IMAGE	slow	There is no images recorded on the SMC or memory.	Record new images.
CONFIRM WRITE PROTECTION	slow	The card or memory is protected to record.	Remove the protection label.
CONFIRM PROTECTION	slow	When you try to delete to protected image.	Cancel the protect of image.
MEMORY READ ERROR	slow	The camera can not playback.	Format a card or memory or insert card recorded on this camcorder.
MEMORY WRITE ERROR	slow	The camera can not record.	Format a card or memory or change to a new card.
NEED FORMAT	slow	The card or memory needs to format.	Format a card or memory.
FILE DELETE	slow	When progressing FILE DELETE.	Wait until the end of deleting.
MEMORY FORMAT	slow	When progressing MEMORY FORMAT.	Wait until the end of formatting.
FILE COPY	slow	When progressing FILE COPY.	Wait until the end of copying.

故障排除

在手动录像/手动播放模式自诊断显示

显示	闪烁	意义	排除故障措施
NO MEMORY ! (无内存)	慢	摄录一体机中没有卡或存储器。	插入一张卡
MEMORY IS FULL 内存已满!	慢	没有足够的内存来录制。	更换一张新卡或擦除录制的图像。
NO STORED IMAGE 无存储的图像	慢	SMC或内存中没有录制的图像。	录制新的图像。
CONFIRM WRITE PROTECTION 写保护	慢	卡或内存受到保护防止录制。	去除保护标签。
CONFIRM WRITE PROTECTION 保护	慢	在您试图删除保护的图像时。	取消图像保护。
CONFIRM PROTECTION 需要格式化	慢	卡或内存需要格式化	格式化卡或内存。
MEMORY WRITE ERROR 读盘错误	慢	摄像机不能重放。	格式化卡或内存或插入在本摄录一体机上录制的卡。
NEED FORMAT 写入错误	慢	摄像机不能录制。	格式化卡或内存或更换一张新卡。
FILE DELETE 正在删除	慢	在处理文件删除时。	等待直到删除结束
MEMORY FORMAT 正在格式化	慢	在处理内存格式化时。	等待直到格式化结束。
FILE COPY 正在复制	慢	在处理文件复制时。	等待直到复制结束。

ENGLISH

Troubleshooting

⌘ If these instructions do not allow you to solve the problem, contact your nearest authorized service centre.

Symptom	Explanation/Solution
You cannot switch the camcorder on	Check the battery pack or the AC Power Adapter.
START/STOP button does not operate while recording	Check the POWER switch is set to CAM. You have reached the end of the cassette. Check the record protection tab on the cassette.
The camcorder goes off automatically.	You have left the camcorder set to STBY for more than 5 minutes without using it. The battery pack is fully exhausted.
The battery pack is quickly exhausted.	The atmospheric temperature is too low. The battery pack has not been charged fully. The battery pack is completely dead, and cannot be recharged, Use another battery pack.
When you see a blue screen during playback	The video heads may be dirty. Clean the head with a cleaning tape.
A vertical strip appears on the screen when recording a dark background.	The contrast between the subject and the background is too great for the camcorder to operate normally. Make the background bright to reduce the contrast or use the BLC function while you are recording brighter.
The image in the viewfinder is blurred.	The Viewfinder lens has not been adjusted. Adjust the viewfinder control lever until the indicators displayed on the viewfinder come into sharp focus.
Auto focus does not work.	Check the M.FOCUS menu. Auto focus does not work in the Manual Focus mode.
Play, FF or REW button does not work.	Check the POWER switch. Set the power switch to VCR. You have reached the beginning or end of the cassette.
When you see the broken block image during the EDIT SEARCH.	It is the characteristic of this camcorder and it is not a failure or defect.

中文

故障排除

⌘ 如果下述说明未能使您排除故障，请与距离最近、经过授权的服务中心联系。

故障现象	原因/排除方法
无法接通摄录一体机的电源	检查电池组或交流电源适配器
拍摄时无法操作启动/停止（START/STOP）钮	检查电源开关，将其设定到“摄像机”（CAM）位置。 盒带已到达终点。检查盒带上的录制保护标签。
摄录一体机自动关机	摄录一体机设定于待机状态，闲置未使用的时间超过5分钟。电池组电能完全用尽。
电池组电能很快用尽	环境温度过低。 电池组充电不足。 电池组已废，无法为其充电。使用另一电池组。 重放时看到屏幕一片蓝色
视频磁头脏污。	用清洁带清洁磁头。
在录制屏幕的黑色背景上出现垂直条纹	被摄体与背景之间的对比度过大，使摄录一体机不能正常操作。提高背景亮度，减小反差；或在拍摄较亮的背景时使用背光补偿（BLC）功能。
取景器中的图像模糊不清	取景器透镜未经调整。 调整取景器控制手柄，直到显示在取景器上的指示符清晰为止。
自动聚焦功能失灵	检查手动聚焦（M.FOCUS）菜单。在手动聚焦模式下自动聚焦功能不起作用。
放像、快进和快倒等按钮均失灵	检查电源开关，将电源开关设定到录像机位置。
盒带已走至开头或末尾。	在编辑搜索过程中看到断续方块形图像 这是本摄录一体机的特性，并非故障或缺陷。

ENGLISH

Specifications

Model name: VP-D130/D130i/D190/D190i

System	
Video signal	PAL, CCIR standards
Video recording system	2 rotary heads, Helical scanning system
Audio recording system	Rotary heads, PCM system
Usable cassette	Digital video tape (6.35mm width): Mini DV cassette
Tape speed	SP: approx. 18.83mm/s LP: approx. 12.57mm/s
Tape recording time	SP: 60 minutes (when using DVM 60) LP: 90 minutes (when using DVM 60)
FF/REW time	Approx. 150 sec. (using DVM60 tape)
Image device	CCD (Charge Coupled Device)
Lens	F1.8 12x(Optical), 480x(Digital) Electronic zoom lens
Filter diameter	Ø37
LCD monitor/Viewfinder	
Size/dot number	2.5inch/200,000
LCD monitor Method	TFT LCD
Viewfinder	VP-D190/D190i : 0.44” colour LCD, VP-D130/D130i : 0.24” B/W LCD
Connectors	
Video output	1Vp-p (75Ω terminated)
S-video output	Y: 1Vp-p, 75Ω, C: 0. 286Vp-p, 75Ω
Audio output	-7.5dBs (600Ω terminated)
DV input/output	VP-D130i/D190i : 4pin special in/out connector, VP-D130/D190 : out only
USB output	Mini-B type connector
External mic	Ø3.5 stereo

General	
Power source	DC 8.4V, Lithium Ion Battery Pack 7.4V
Power source type	Lithium Ion Battery Pack, Power supply (100V~240V) 50/60Hz
Power consumption (Recording)	4.9W(LCD), 3.6W(EVF)
Operating temperature	0°~40°C (32°F~104°F)
Storage temperature	-20°C ~ 60°C (-4°F ~ 140°F)
External dimension	Length 104mm, Height 114mm, Width 53.5mm
Weight	VP-D130/D130i : 470g, VP-D190/D190i : 480g (Except for Lithium Ion Battery Pack and tape)
Built-in MIC	Omni-directional stereo condenser microphone
Remote control	Indoors: greater than 15m (straight line) Outdoors: greater than 5m (straight line)

• These technical specifications and design may be changed without notice.

中文

技术规格

型号: VP-D130/D130i/D190/D190i

制式	
视频信号	PAL，CCIR标准
视频录制系统	2个旋转头，螺旋扫描系统
音频录制系统	旋转头，PCM系统
可使用的磁带	数字视频磁带（宽6.35mm）：微型数字视频（DV）盒带
磁带速度	标准播放：约18.83mm/秒长时播放：约12.57mm/秒
磁带录制时间	标准播放：60分钟（使用DVM60时）， 长时播放：90分钟（使用DVM60时）
快进和快倒时间	约150秒（使用DVM60型磁带时）
录像设备	CCD（电荷耦合器件）
镜头	F1.8 12x（光学放大倍数）480x（数字放大倍数）电子变焦镜头
滤光器直径	Ø37
液晶显示屏/取景器	
大小/点数	2.5英寸/200,000
液晶显示屏方式	TFT液晶显示屏
取景器	VP-D190/D190i :0.44"彩色液晶显示屏， VP-D130/D130i :0.24"黑白液晶显示屏
连接器	
视频输出	1Vp-p (75Ω端接)
S－视频输出	Y：1Vp-p, 75Ω，C：0.286Vp-p, 75Ω
音频输出	－7.5dBs (600 Ω)
数字视频（DV）输入/输出	VP-D130i/D190i : 4针专用输入连接器 VP-D130/D190 : 只输出
USB输出	小型B型连接器
外接话筒	Ø3.5立体声

概述	
电源	DC8.4V，锂离子电池组 7.4V
电源种类	锂离子电池组，电源（100V－240V）50/60Hz
功耗（拍摄）	4.9W(液晶显示屏),3.6W(EVF)
操作温度	0°~40°C (32°F~104°F)
储存温度	-20°C ~ 60°C (-4°F ~ 140°F)
	长 104mm,高 114mm,宽 53.5mm
重量	VP-D130/D130i :470g,VP-D190/D190i :480g (锂离子电池组和盒带除外)
内置话筒	全向性立体声话筒
遥控	室内：大于15米（直线距离） 室外：大于5米（直线距离）

• 本产 品的技术 规格和 设计可 能修改，恕不 另行通知。

INDEX

索引

ENGLISH

THIS CAMCORDER IS MANUFACTURED BY:

SAMSUNG ELECTRONICS

***Samsung Electronics' Internet Home Page**

United Kingdom	http://www.samsungelectronics.co.uk
France	http://www.samsung.fr
Australia	http://www.samsung.com.au
Germany	http://www.samsung.de
Sweden	http://www.samsung.se
Poland	http://www.samsung.com.pl
Italia	http://www.samsung.it
Spain	http://www.samsung.es

中文

本摄录一体机由三星电子公司制造。

SAMSUNG ELECTRONICS

*三星电子的互联网主页

英国	http://www.samsungelectronics.co.uk
法国	http://www.samsung.fr
澳大利亚	http://www.samsung.com.au
德国	http://www.samsung.de
瑞典	http://www.samsung.se
波兰	http://www.samsung.com.pl
意大利	http://www.samsung.it
西班牙	http://www.samsung.es

AD68-00442L(AA-E7)